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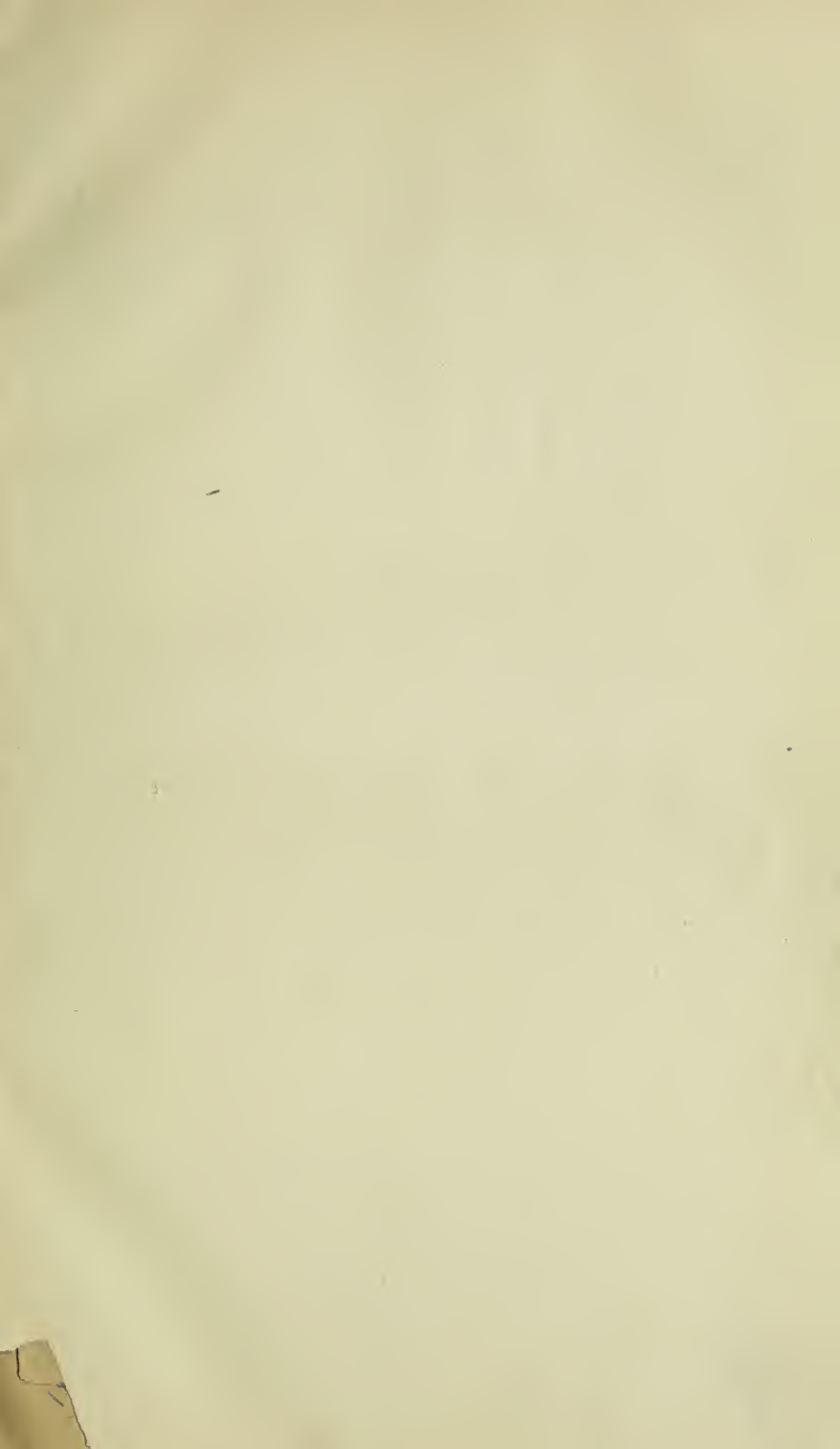
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# AN ANALYSIS

OF

SIR W<sup>M</sup>. HAMILTON'S,

LECTURES ON METAPHYSICS.

WITH NOTES EXPOSITORY AND CRITICAL.

BY

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## PREFACE.

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MARSHALL  
May 13 1877

This little work is intended to be an aid to students in the study of Sir W. Hamilton's Lectures on Metaphysics. The Analysis is almost the same as I have given during the past six years in the lecture-room of the General Assembly's Institution and the notes will I trust be of service in enabling students the better to understand important philosophical doctrines.

I have endeavoured to make the Analysis as *brief* as possible, and would warn students against the adoption, in their ordinary writings, of the forms of expression which I have employed. The mathematical symbols ( + and = ) which I have made use of are intended to aid in securing brevity and clearness by avoiding periphrases and connecting particles and by bringing together as closely as possible related ideas. A little study and practice will soon enable the student to see the meaning of these symbols in different cases. I trust that both the Analysis and the Notes may be of service to those who make use of them.

16 Nov 77 44-42. dec.

R. J.

THE GENERAL ASSEMBLY'S  
INSTITUTION,  
*Calcutta, 10th February 1877.*





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## GENERAL ANALYSIS.



SIR WILLIAM HAMILTON'S Lectures upon Metaphysics may, in general, be divided into the following parts :—

PART 1.—INTRODUCTION :—in which is studied the Absolute Utility of Philosophy Subjective and Objective. Lectures I., II.

PART II.—PHILOSOPHY IN GENERAL :—comprehending a discussion of the Nature of Philosophy and the manner in which it should be studied. Lect. III.—VII.

PART III.—INTRODUCTION TO PSYCHOLOGY :—being an explication of the most important philosophical terms. Lect. VIII.—X.

PART IV.—CONSCIOUSNESS :—classification of its contents, its special conditions, its authority, and general questions connected with it. Lect. XI.—XX.

PART V.—THE COGNITIVE FACULTIES :—comprehending the Presentative, the Conservative, the Reproductive, the Representative, the Elaborative, and the Regulative. ... Lect. XX—XL.

PART VI.—THE FEELINGS :—their Character, Explanation and Classes, ... Lect. XLI.—XLVI.

## SPECIAL ANALYSIS OF PARTS.

## PART I.

## INTRODUCTION.

Lec. I. THE Utility of any branch of knowledge is its value as a means towards an end + is of two kinds Relative and Absolute. Relative Utility = value of any study in relation to other studies ; Absolute Utility = its value in itself. We study here only the latter. The Absolute Utility of Philosophy of two kinds :—

A. Subjective, as it cultivates the mind or knowing subject by calling its faculties into exercise + The Useful = a mean towards an end + a mean towards a higher end constitutes a higher utility than a mean towards a lower end + there prevail two errors with reference to the comparative utility of different studies.

I. The first consists in supposing that man is not an end to himself but a mean to something out of himself.

A. By nature man is an end to himself = his own perfection and happiness constitute the goal of his activity + by attaining these he chiefly glorifies God.

B. In the actual conditions of society men are diverted from their chief end to serve the purposes of others.



C. Hence the distinction between a *liberal* education designed to cultivate man's faculties, and a *professional* education designed to fit him for the service of society.

II. The second consists in subordinating intellectual cultivation to the acquisition of knowledge.

A. The mere acquisition of knowledge is not identical with intellectual cultivation—it does not necessarily or always involve a high kind of mental exercise which is the condition of mental culture.

B. Knowledge is subordinate to mental culture.

I. In practical knowledge *ex hypothesi* not truth but practice is the end.

II. In speculative knowledge the pleasure of mental activity and not the possession of truth is the motive which stimulates activity.

III. Hence we conclude that Philosophy, being the best gymnastic of the mind, is the best entitled to be called useful.

B. Objective, as it supplies the mind with knowledge—the knowledge of the human mind is the most important and noble of all kinds of knowledge + the phenomena of mind alone afford the basis of an argument for God's existence.

Lec. II.

I. Idea of God—that of a First Cause + Intelligence + Virtue—a First Cause without intelligence and virtue is blind Fate + an Intelligent and virtuous Being without original and infinite power is dependent and limited—the *peculiar* attributes of Deity are Intelligence and Virtue.

II. That intelligence stands first in the absolute order of existence + that the universe is governed by moral laws, rest exclusively on the phenomena of mind=phenomena of matter governed by immutable laws + the phenomena of mind which are independent of the physical organization are free=in man, as a free intelligence, we can see the possibility and the ground of believing in a God.

A. Intelligence first in the order of existence= if in man intelligence be a free power independent of the physical organism we may conclude by analogy that intelligence is first and independent in the universe.

B. The universe is governed not merely by physical but by moral laws=this depends upon the existence of a moral world + this upon our own moral agency + this upon human liberty + this is established in three ways :—

i. A careful study of mind is necessary to attain a clear consciousness of the fact of freedom.

ii. A profound philosophy is necessary to obviate the difficulties in the way of explaining the possibility of this fact=by showing that freedom though inconceivable may not therefore be impossible.

iii. The study of mind counteracts the influence of the study of matter, which last (1) diverts us from all notice of the phenomena of moral liberty and (2) habituates us to the contemplation of blind necessity.

C. These uses of philosophy not superseded under the Christian dispensation since revelation supposes a genuine philosophy of mind as the condition of its truth.

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## PART II.

## PHILOSOPHY IN GENERAL.

## A. Nature and Comprehension of Philosophy = Lec. III.

can now be not completely but only provisionally explained as a guide to study = may be described from two points of view :—

I. With reference to the *name* philosophy is etymologically *a love of wisdom* = the term philosopher supposed to have been first assumed by Pythagoras, but probably first rendered familiar by Socrates in opposition to the Sophists.

II. With reference to the *thing*,—

A. Philosophy has been variously defined according to the view taken by different philosophers of its nature + in Greek antiquity there were six famous definitions.

I. “The knowledge of things existent as existent” = Pythagoras.

II. “The knowledge of thing divine and human” = Pythagoras.

III. “A meditation of death” = Plato.

IV. “A resembling of the Deity in so far as that is competent to man” = Plato.

v. “The art of arts, and science of sciences” = Aristotle.

VI. “The love of wisdom” = Pythagoras.

B. Philosophy is a kind of knowledge distinguished from empirical knowledge = empirical or historical knowledge is the know-

ledge *that* something is, while philosophical knowledge is the knowledge *why* or *how* it is = a knowledge of things in their causes = it aims at the discovery of a first cause, but vainly in consequence of the limitation of our faculties.

- I. Thus in a wide sense all sciences occupied in the search after causes are philosophical.
- II. In a special sense the study of mind is properly called philosophy.
  - A. Because all knowledge depends, for its possibility, upon certain conditions found only in the mind.
  - B. Because, philosophy being concerned about causes and the mind giving the principal constituents of every act of knowledge, it demands special study.

Lec. IV. **B.** The causes of philosophy are implied in man's very capacity for knowledge and are of two kinds :—

I. Essential and necessary causes.

A. Principle of cause and effect = the felt necessity to connect objects of knowledge with others which may explain them = it is impossible to believe in the absolute commencement of anything.

B. The love of unity = a desire to perceive unity or harmony amidst variety of objects = exhibited in perception, imagination, generalization, judgment and reasoning.

- I. This desire to discover unity, leading us to expect uniformity in nature, is the efficient

cause and guiding principle of scientific discovery.

- II. It is also a source of error = leads to the supposition of unity where it does not exist = has led to the majority of false theories + is identical with pre-conceived opinion or prejudice.

II. Auxiliary cause = Wonder or Curiosity = does not account for the rise of philosophy but explains why one class of objects is studied in preference to another = *e. g.* in early times external objects excited wonder and study before the human mind.

C. The subjective conditions of the successful study of philosophy. Lec. V.

I. The renunciation of prejudice = the mind must be free from prepossession and open to conviction = the power of prejudice and custom perpetuates error and leads to sceptical conclusions regarding the existence of truth and goodness.

II. Doubt is necessary = if people do not doubt their previous opinions they will not search for truth.

A. Philosophical doubt is indulged as a mean to the discovery of truth.

B. Scepticism is doubt which rests in itself and seeks not for truth = shallow and weak.

III. The subjugation of the passions, especially,—

A. Sloth.

B. Pride.



Lec. VI. **D.** The method of philosophy = the procedure by which the ends of philosophy may be reached.

I. Method explained in relation to the ends of philosophy.

A. First end of philosophy,—the discovery of causes — can be attained,

- I. by decomposing the effects into their causes or elements.
- II. by reconstructing these into their products or effects + these two processes, called analysis and synthesis, are the correlative parts of the one method and each is imperfect without the other.

B. The second end of philosophy,—the reduction of our knowledge to unity—is reached by the same two-fold method, *e. g.*

- I. In perception we comprehend great or multi-form objects by first attending to the parts (analysis), and then taking a comprehensive view of the whole (synthesis).
- II. In classification and induction we proceed first to compare resemblances (analysis), and then to bring together resembling phenomena under some class or law (synthesis).

II. Method illustrated by the history of philosophy.

A. Ancient philosophy began by applying analysis and synthesis to the objects of their knowledge, but in a very uncritical and imperfect manner.

- I. Thales and the Ionic school studied external nature to find the first principle or cause of all things + found it in some material element as water, air, or fire.
- II. Pythagoras and the Italic school discovered the cause of things in their form or harmony or number, as distinguished from the matter or substance.
- III. The Eleatic school referred all things to The One or Pure Being, as their principle or cause.
- IV. Socrates diverted the attention of men from the universe to the mind, but did not change the method.
- V. Plato and Aristotle studied,—the former—the higher faculties of intelligence,—the latter—the ordinary understanding, laying the basis respectively of transcendental idealism and phenomenal psychology, but both employing the same method.
- VI. The Alexandrian school of Neo-Platonists was eclectic and comprehensive.
- VII. Bacon and Descartes used the same method of analysis and synthesis but insisted upon a more careful and thorough analysis and a more cautious synthesis.

## E. The Divisions of philosophy.

Lec. VII.

- I. The most ancient division, instituted by Aristotle and adopted by the Stoics, Epicureans and others, is into Theoretical and Practical = Theoretical philosophy is knowledge for the sake of knowing + practical philosophy is knowledge for the sake of its practical application.

- A. Since all philosophy is properly theoretical or speculative it is illogical to divide it by a principle foreign to its nature.
- B. Since all philosophy, with reference to its final end, is practical, this principle does not accurately divide the different branches of philosophy.
- I. Among the ancients great differences of opinion existed regarding the position of Logic in relation to philosophy in general.
- II. The distinction between *Arts* and *Sciences* does not correspond to that between sciences *practical* and sciences *speculative* = this explained by Aristotle's use of the terms *praxis* and *praktikos*. *Praxis* in a generic sense was opposed to speculation + *praxis* in a specific sense was co-ordinate with *poiésis* or production, both comprehended by the generic *praxis*, thus :—

<i>praxis</i>	<i>theoria</i> =speculative
{	philosophy
praxis or	poiésis, or
science practical	science productive,
as Ethics, Politics.	as Logic, Rhetoric.
=an art, being defined as a science productive,	
may not be identical with a practical science.	

- II Bacon divides philosophy with reference to its object-matter as concerned about Diety, Nature, and Man.
- II. The Cartesians and Kant divide into theoretical and practical with various subdivisions.

IV. Hamilton proposes the following division :—

Mind or consciousness affords ...	{	Facts,—phenomeno- logy, Empirical Psychology	}	Cognitions, Feeling, Co- native Powers (will and De- sire.)
		Laws,—Nomology or Rational Psy- chology		Cognitions,— Logic. Feeling,— Aesthetics. Conation,— Ethics, Poli- tics.
		Results,—Ontology Inferential Psy- chology		Being of God. Immortality of soul. Matter.

*Note.* Sir W. Hamilton has nowhere systematically followed this division.

### PART III.

#### INTRODUCTION TO PSYCHOLOGY :

being an explication of the most important terms :— Lec. VIII.

A. General Definition = Psychology is the science conversant about the *phenomena* or *modifications* or *states* of the *mind* or *conscious-subject*, or *soul* or *spirit*, or *self* or *ego*.

I. Use of *Psychology* vindicated against the objection that it is an exotic or technical name.

A. Philosophy itself and the most of its branches have received Greek technical names.

B. *Psychology* is now naturalized in Europe.

C. Its use avoids frequent periphrases.

- D. It affords a distinctive adjective for expressing contrast with other branches of science.
- E. It is not open to the objection applicable to such terms as *Physiology of mind* = ψυχη and terms in other languages applied to the mind have lost their original material meaning.

II. General explanation regarding the correlative terms *phenomenon*, *subject* etc. = all knowledge is only of the known or what is relative to our minds = mind and matter as known are two *series of phenomena* + mind and matter as unknown and unknowable are *two substances* inferred to account for phenomena = admitted by all philosophers that absolute existence is unknown + this principle has two branches :—

- A. The number of the classes of qualities may be greater than of our powers of perception = things may have qualities which we can not perceive as we perceive colours, smells etc.
- B. The modes or qualities known to us may not be known as they actually exist = in perception the complete phenomenon as known is composed of elements contributed by (a) the perceiving faculties (b) the medium, and (c) the external quality or power as it exists independent of perception.

## B. Particular explication of terms.

### I. Of the correlative terms.

- A. Those which relate to the absolute and unknown.



- I. Subject = the unknown basis of phenomena chiefly mental.
- II. Substance = that which exists absolutely and in itself,—in this sense derived from *subsisto* + that which exists as the base of attributes,—in this sense derived from *substo*. Philosophers have fallen into three errors,—(a) in denying the existence of substance, (b) in speculating about substance apart from phenomena, (c) in considering one of the phenomena as the substance of the others.

B. Those which denote the relative and unknown.

- I. Mode = manner of existence of anything.
- II. Modification = bringing into a certain mode.
- III. State = similar to mode but more extensive in application.
- IV. Quality = (1) essential,—that which a thing cannot lose without ceasing to exist + (2) accidental,—that which a thing may have at one time and not at another.
- v. Attribute = quality used in an exalted sense.
- VI. Property = peculiar quality or quality.
- VII. Phenomenon = *that which appears* = a general term for every quality or mode of existence which can be known to us.

II. Of the terms applied to the mental subject.

Lec. IX.

- A. *Mind* = analogous to Lat. *mens* + probably derived from the root *मन* to know = the subject of our conscious phenomena = can be defined only a *Posteriori*, *that which perceives, thinks, feels, wills, etc.*
- B. *Conscious-subject* = that which is conscious of all its phenomena = the mind.

C. *Subject and Object* = these terms of importance

- I. because they afford a convenient adjective
- II. because they express clearly an important contrast.

D. *Self, ego* = that within us which is to be distinguished both from our physical organs and mental phenomena = the conscious-subject.

Lec. X.

III. Of certain other frequently used terms.

A. *Hypothesis* = the provisional explanation of a difficulty.

- I. An hypothesis is legitimate, (1) when the alleged phenomenon to be explained has been ascertained actually to exist, (2) when it can not be explained otherwise than by an hypothesis.
- II. An hypothesis is to be preferred to others according as, (a) it involves nothing contradictory, (b) it more completely explains the phenomena, (c) it is more independent of subsidiary hypotheses

B. *Theory* = mere knowledge, or knowledge for its own sake + *practice* = the exercise of an art or the application of a science.

C. *Power* = active or passive = that which is able to produce or able to suffer a change = Reid incorrect in his criticism of Locke.

D. *Faculty* = active power.

E. *Capacity* = passive power.

F. *Disposition* = a natural + *habit* = an acquired tendency to action.

- G. *Act. operation energy* = distinguished from potentiality = a power exists potentially  
 (a) when it is not actually in operation  
 (b) when it lies latent or undeveloped.
- H. *Function* = the specific character or mode of operation of a power or organ.

## PART IV.

## CONCIOUSNESS.

## A. General description of consciousness.

Lec. XI

- I. Consciousness = the most essential element of mental life = a simple indivisible phenomenon embracing all other mental phenomena.
- II. All mental phenomena comprehended in consciousness are divisible into three classes :—
- A. Knowledge or cognition.
  - B. Feeling or the phenomena of pleasure and pain
  - C. Conation or the phenomena of will and desire.
- III. The nomenclature of the classes is imperfect in English.
- A. The terms *knowledge* and *cognition* are sufficient.
  - B. The term *feeling* is ambiguous, being applicable to the sense of touch as well as to pleasures and pains.
  - C. No English term expresses what is common to will and desire = *tendency* is vague + *appetency* means only desire + *orectic* is open to the same objection + *activity* or *active* is applicable to all faculties + *conation* is actually adopted by Hamilton.

IV. This classification of the phenomena of consciousness, first instituted by Kant, has been objected to on the ground that the classes are not coordinate, the phenomenon of knowledge being involved in all the others.

- A. In feeling and conation an element is present which is not involved in knowledge.
- B. Knowledge is conceivable without feeling and conation, but not feeling and conation without knowledge.
- C. Knowledge and feeling are conceivable without conation but not conation without feeling = while those three classes may be logically distinguished they are all coexistent and inseparable.

V. Consciousness is to be first studied.

- A. Consciousness cannot be defined = it lies at the root of all knowledge and is the most general of mental phenomena = cannot be brought under a higher genus.
- B. It may be philosophically analyzed = all mental phenomena are possible only under the condition of being known in consciousness = consciousness is not different from the particular phenomena of cognition, feeling, and conation but is the general condition of their existence + consciousness involves three things,—(a) a recognising or knowing subject; (b) a known modification; (c) a recognition by the subject of the modification.
- C. This analysis does not imply actual separation of consciousness from particular phenomena = like the parts of a triangle they are inseparable but may be attended to separately + consciousness and know-

ledge are only the same thing but viewed in different relations = in consciousness the relation of the object to the *ego* is the prominent point.

- D. Previous to Descartes the term *conscientia* was used in an ethical sense + Descartes gave it its psychological meaning + in Greek there is no precisely similar term.

## B. Special conditions of Consciousness.

### I. Those generally admitted.

A. Consciousness is an actual not a potential knowledge.

B. It is immediate not mediate knowledge.

C. It involves contrast or discrimination.

I. Between self and not self, mind and matter.

II. Between different phenomena of self.

III. Between the parts and qualities of the outer world.

D. It involves judgment.

E. It implies memory.

- II. A condition not generally admitted = our Lec. XII. consciousness coextensive with our knowledge = coextensive with our cognitive faculties = not a special faculty = comprehends both mental operations and their objects = this condition not recognised by Reid and Stewart who make consciousness a special faculty.

- A. This condition vindicated generally = the knowledge of relatives being one, and the act of knowledge being the correlative of the object, we cannot be conscious of the one without the other.



B. This condition vindicated by an examination of the special faculties contrasted by Reid and Stewart, with consciousness.

I. Imagination according to Reid and Stewart = the act of conceiving an object which may have no actual objective existence = then, says Hamilton, the object must be in the mind, a mental modification, and therefore the object of consciousness.

II. Memory according to Reid = an immediate knowledge of the past as consciousness is an immediate knowledge of the present.

A. Conditions of immediate knowledge = the object must be known in itself + it must be actually in existence and in immediate relation to our faculties of knowing.

B. These conditions applied to memory = the object of memory being past cannot be known in itself, + cannot be in immediate relation to our knowing faculties = in memory we only *believe* the past existence of the object + we *are conscious* of the present representation and belief of that object = the contents of memory are within the sphere of consciousness.

Lec. XIII.

III. Perception = Reid's principal merit as a philosopher consists in asserting, against the idealists, our *immediate knowledge* of material objects + he inconsistently denied a *consciousness* of material objects and in doing so, erred.

A. Because the knowledge of opposites is one = the *ego* and *non-ego*, mind and matter, being opposites or correlatives, must be known together in the same indivisible act of consciousness.

B. Because his denial is inconsistent with his doctrine of immediate perception.

1. Since it asserts that we can know what we are not conscious of knowing.



ii. Since it destroys the distinction of consciousness itself = it is the external quality which determines the special phenomenon of consciousness and  $\therefore$  the fact that we are conscious of a particular mental modification implies that we are conscious of the external quality which gave rise to and determined it.

c. Because, if Reid avoids inconsistency by holding that we are conscious immediately only of a mental representation of external qualities, then he is still an idealist and his attack upon other idealists is a blunder = this supposition is untenable.

#### IV. Attention and reflection.

A. Certain collateral errors noticed = Reid holds that attention and reflection are identical + Stewart maintains that reflection is properly attention directed to the phenomena of mind ; observation, attention directed to the phenomena of matter.

B. Is attention a faculty distinct from consciousness as Reid and Stewart hold ? = it is not, but only consciousness applied to objects under the special law of intelligence that, *the greater the number of objects to which our consciousness is simultaneously extended the smaller is the intensity with which it is able to consider each.*

### C. Attention as a general phenomenon of consciousness.

I. Can we attend to more than one object at once ?

A. Stewart's doctrine = we can attend to only one, *e. g.*

I. In the case of the equilibrist different successive mental acts are executed so rapidly as to appear simultaneous.

II. In a concert of music the mind passes from one sound to another so rapidly as to show no interval of time.

- III. In perception objects apparently perceived simultaneously are really perceived successively = in these three cases Stewart's opinion is avowedly deduced from his principle.

B. Criticised.

- I. In a concert many sounds are simultaneous = if heard at all they must be attended to at once ; but they are heard ;  $\therefore$  more than one must be attended to at once + on Stewart's hypothesis the sense of *harmony* would be impossible.
- II. In vision we could not see an object *as a whole* without attending to several parts at once either in perception or imagination.

Lec. XIV.

- C. Brown's doctrine = the mind cannot exist in two different states at once = supported by Locke and opposed by Leibnitz and Aristotle = if Brown's doctrine were correct all comparison and discrimination would be impossible = the possibility of the latter proves the fallacy of the former.

II. The extent and value of attention.

- A. Philosophers hold variously that we can attend to from four to six objects at once.
- B. Attention to a new subject is at first difficult + by time and custom distractions diminish and the subject becomes a part of the intellectual life = this result is produced by continued attention.
- C. Newton, Socrates, Descartes and many others concur in attributing to attention a high degree of importance.

Lec. XV. **D.** Consciousness,—its evidence and authority = as consciousness is the only source of philoso-

phical knowledge the possibility of philosophy depends upon the veracity of consciousness = this admitted by all + the cause of variation in philosophical doctrine is that philosophers proceed to the study of consciousness with pre-conceived opinions which they desire to support = it is necessary to institute rules for the interpretation of consciousness.

I. The law of Parcimony = That no fact be assumed as a fact of consciousness but what is ultimate and simple.

A. Criteria of facts of consciousness.

- I. A fact of consciousness is *simple* and the *ultimate* result of analysis or the *primary* principle of mental activity.
- II. It is *necessary* = impossible not to think it.
- III. It is self-evident = given with a mere belief of its reality.

B. Two phases of facts of consciousness = they may be considered either as testifying to their own phenomenal existence or to the existence of something else beyond them = in the former case they are indubitable, in the latter they may be doubted.

- I. In perception the phenomenon given in consciousness is self perceiving and not-self perceived = this duality of consciousness cannot be doubted + the object testified to by the act of consciousness,—the external reality—may not exist and the not-self perceived may be only a mental representation.

- II. In memory we are compelled to believe the mental phenomenon given in consciousness,—the mental representation + we may doubt the truthfulness of our memory,—the past event believed to be represented = Stewart was in error in giving equal credit to these two kinds of testimony.
- II. The law of Integrity = That the whole facts of consciousness be taken, without reserve or hesitation whether given as constituent or as regulative data,—as phenomena or as laws.
- III. The law of Harmony = That nothing but the facts of consciousness be taken, or if inferences of reasoning be admitted, that these be recognised as legitimate only as deduced from and in subordination to the immediate data of consciousness.
- A. In his doctrine of external perception Brown violates the second and third of these laws = he denies the fact of phenomenal duality given in consciousness + then inconsistently appeals to universal beliefs, that is to consciousness, to establish external reality..
- B. Dr. Brown establishes his doctrine of Personal Identity upon intuitive and universal beliefs, that is facts of consciousness = since he denied the veracity of consciousness in perception he has no right to appeal to consciousness in regard to anything else.
- C. In his doctrine of mental individuality he holds the same belief and makes the same inconsistent appeal.

**E.** Violations of the authority of consciousness Lec. XVI.  
 = denials of the fact that in consciousness we are immediately aware of an *ego* and a *mon-ego*, known together and in contrast to one another  
 = the sceptics, Berkeley and Hume, admit that men believe in the immediate perception of external realities.

**I.** Classification of theories of perception with reference to the admission or denial of the duality of consciousness.

**A.** Those who, holding the phenomenal duality of consciousness, trust also the veracity of consciousness in testifying to a duality mental and material, of substantial existence = Natural Realists.

**B.** Those who, admitting the phenomenal duality of consciousness, surrender its veracity in testifying to our immediate knowledge of material phenomena and of the existence of matter, but endeavour in other ways to establish duality of existence = Cosmothetic Idealists or Representationists.

**I.** Some of these hold that the representative object of which we are conscious is not a mere mental modification = cruder form.

**II.** Some hold that the conscious representation is only a modification of the mind itself, = finer form.

**C.** Those who, admitting the phenomenal duality of consciousness, surrender its veracity in testifying to a duality of existence



and hold the unity of all existence = monists.

I. Some, admitting the testimony of consciousness to the equipoise of mind and matter, derive both from one common substance = Absolute Identity.

II. Others, denying the testimony of consciousness to the equipoise of mind and matter derive the one from the other either :—

A. matter from mind = idealism, or

B. mind from matter = materialism.

II. Hypotheses regarding intercourse between mind and body = belong only to dualism since monists deny the real duality of mind and body.

A. Occasional causes = mind and matter can have no direct intercourse + material phenomena the occasion upon which Deity produces the corresponding mental phenomena, and *vice versa* = Cartesian doctrine.

B. Pre-established harmony = God has from the beginning established a harmony between the two series of mental and material phenomena so that the proper events in each series, without any causal relation, always correspond with one another = Leibnitz.

C. Plastic medium = between mind and matter there is a medium interposed through which the one can operate upon the other = traced to Plato.

D. Physical influence = the external object, through the nerves and the brain, directly acts upon the mind and produces an impression + the mind similarly exercises



a real influence upon the body = Aristotelian doctrine.

F. The activity and passivity of mind = activity and passivity always conjoined + we are conscious only of activity + in relation to this general fact there arise some important questions :—

I. Are we always consciously active ?

Lec. XVII.

A. Opinions of philosophers.

- I. Plato and Platonists = mind continually energetic.
- II. Aristotle and Aristotelians = doubtful and inharmonious.
- III. Cicero and St. Augustine = mind always active.
- IV. Descartes and Malebranche = since the soul consists in actual thought it must always be active or cease to be = continual activity assumed *a priori*.
- V. Locke = thought not the essence of the soul but one of its operations + not necessary for the soul to be always active + not a fact that we are always conscious of activity + if we do not remember our activity in sleep we were probably not active = Descartes' doctrine is doubtful and his method of establishing it by a priori assumption instead of an appeal to facts is unphilosophical.
- VI. Leibnitz = in conscious activity there are many phenomena pass through the mind to which we do not attend and which we soon forget + in sleep we may be active

although we have forgotten our activity + in sleep and sudden awakening there are many confused perceptions=probably the mind is always active.

VII. Kant=mind always and necessarily active.

## B. Hamilton's discussion of question.

- I. Somnambulism = mental faculties unusually exalted + forgetfulness of normal state + remembrance of past somnambulist states.
- II. Dreaming = possibly not accompanied by memory as shewn by author's experience = when roused from incipient slumber there is a dim consciousness of thinking + when roused from sleep there is a recollection of dreaming = hence probable that mind is always consciously active.

## C. Supported by Mr. Jouffroy.

- I. General argument = mind sometimes awake when senses asleep + not proved that it ever sleeps with them = probable that it is always awake.
- II. Corroborating facts.
  - A. A stranger in Paris at first disturbed by noise, afterwards not = mind at first attends to external noise afterwards not.
  - B. In sleep sometimes a faint noise awakens when a great one does not according as the mind judges of its meaning, of which illustrations are given.
- III. General conclusions.
  - A. In sleeps senses torpid, mind awake.
  - B. Certain senses continue active.
  - C. Mind judges the meaning of these sensations.
  - D. Reason of minds awakening senses = disquiet or a sense of duty.
  - E. Does so by its activity overcoming torpor of senses.

## II. Is the mind ever unconsciously modified? Lec. XVIII.

A. The greater part of our knowledge lies out of consciousness, in a latent state, except when called up by our directing special attention to it.

B. In certain abnormal states, such as madness and fever, long-forgotten knowledge is reproduced and wonderful powers exhibited, = there may be latent knowledge and powers in the mind not observable in a normal state but capable of being called out in peculiar conditions.

C. There are, in ordinary, mental modifications of which we are unconscious but which manifest their existence by effects of which we are conscious. To this proposition there are two objections :—

I. We cannot know what is beyond the condition of all knowledge *viz.*, consciousness.

Answer :—there are many things which we can know only through their effects + consciousness supposes some special modification which must have arisen by transition from some previous modification = the transition between the two not consciously known.

II. Knowledge cannot rise out of ignorance consciousness out of unconsciousness. Answered by the study of instances taken from :—

A. External Perception = In sight, the *minimum visibile* = the smallest expanse we can be conscious of seeing = this may be divided = each part produces no conscious sensation =  $\therefore$  must produce a mental modification of which we are unconscious + in hearing, sound is made up of parts of which separately we are unconscious =

each part must produce a mental effect beneath consciousness.

B. Association of ideas = suppose a thought, A suggests another C which can be related to it only through B,—B must be in the mind but latent + Stewart holds that the intermediate link comes before consciousness but is forgotten = refuted by considering :—

- i. this hypothesis as inconceivable as the other,
- ii. it violates the analogy of consciousness which supposes memory,
- iii. it is disproved by the analogy of perception, and
- iv. no memory of conscious phenomena = no consciousness

A. Acquired dexterities and habits = explained by three theories :—

- i. Mechanical theory = series of actions, at first voluntary come to be performed without will or attention by a kind of mechanical or physical association = held by Reid and Hartley.
- ii. Stewart's theory = mechanical theory absurd because it postulates an unknown power = in a series of actions each one is caused by a volition which is immediately forgotten. Objection = theory inconceivable since in certain acquired dexterities the mind could not attend to each action separately.
- iii. Theory of mental latency = bodily movements caused by unconscious mental activities = this application of the theory supported by the analogy of its application to perception.

## G. Three Principal Facts of consciousness.

I. Self-Existence or the feeling that I. the thinking subject, exist = a simple and ultimate fact of consciousness = Cartesian *cogito ego sum* as an argument is tautological and false = not an argument but a simple assertion of the impossibility of doubting self-existence.

II. Mental Unity or the belief that *we* are not a mere series of phenomena but a self-sub-

sistent entity = a datum of consciousness  
= Hume and Kant in denying this deny the  
veracity of consciousness and subvert philosophy.

III. Mental Identity or the conscious assurance  
that *we* are always the same = held by  
Locke, Leibnitz, Butler and Reid to prove  
the substantial permanence of self + the validity  
of the proof denied by Kant.

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## PART V.

## THE COGNITIVE FACULTIES.

Lec. XIX. **A.** Introduction, comprehending an account of the difficulties and facilities of psychological study.

I. Difficulties of psychological investigation.

- A. Conscious mind at once observing subject and object observed = state of mind observed and act of mind observing tend to annihilate each other.
- B. Want of mutual co-operation = in this respect psychology different from the study of nature.
- C. Facts of consciousness must be personally observed, not accepted at second hand.
- D. They can be studied only through memory = can be but imperfectly observed.
- E. Can only be presented in succession.
- F. Mental phenomena cannot be separated + can be discriminated only by abstraction.
- G. Self-observation painful and not exercised till maturity.

II. Facilities of psychological study = depends upon no external conditions except language.

Lec. XX. **B.** Distribution of the cognitive faculties.

- I. General explication = mental faculties are not different parts or organs of the mind but classes of similar mental actions and passions + psychological division is important for the study of the phenomena since they are present in consciousness in great complexity.



## II. Evolution of special faculties.

- A. The Presentative Faculty is necessary as a condition of our possessing knowledge = divided into external perception and self-consciousness.
- B. The Conservative or Retentive Faculty is required for the preservation of the knowledge acquired.
- C. The Reproductive Faculty is necessary as a condition of bringing forgotten knowledge before consciousness = may act either voluntarily or involuntarily.
- D. The Representative Faculty is needed to hold up reproduced knowledge before the mind.
- E. The Elaborative Faculty, in the way of analysis and synthesis, compares phenomena, and upon the comparison founds generalization, judgment and reasoning.
- F. The Regulative Faculty, though not properly called a faculty, furnishes principles for the government of the mind in all its operations = these principles are native and necessary laws and, together, make up common sense or *a priori* knowledge.

## C. Detailed study of special faculties.

### I. The Presentative Faculty.

- A. External perception = the principal point at issue refers to the question,—is our perception of external objects mediate or immediate ?

If immediate = fact of consciousness ; if mediate there are two hypotheses = (*a*) representative object different from mind + (*b*) representative object indetical with

mind = Reid ignorant of this distinction  
 = confused perception with imagination  
 and memory + misunderstood other philo-  
 sophers.

# I. Reid's historical review.

## A. Plato.

- I. Reid supposss his doctrine to be that we per-  
 ceive only the shadows of things not the things  
 themselves.
- II. Plato held that a percipoint power of the soul  
 sallies out towards the object + his simile of  
 the cave, which Reid supposed to teach a theory  
 of perception, is used to illustrate the relation  
 between the phenomenal and the real or arch-  
 etypal worlds.

## B. Aristotle.

- I. Reid's interpretation = our senses receive sen-  
 sible forms or species of objects + bodies  
 send forth different kinds of forms.
- II. True account = Aristotle was probably a  
 natural realist + only his followers—the  
 schoolmen—held the doctrine of species.

## C. Descartes.

- I. Reid's account = Descartes inconsistent =  
 sometimes held that there are images of  
 material objects perceived in the brain +  
 sometimes that these images are not perceived  
 but merely occasions of mental ideas.
- II. True account = between mind and matter  
 intercourse is possible only by supernatural  
 aid + Descartes applies the term *idea* both  
 to the organic *occasion* of sensation and to  
 the mental *representation* = hence Reid's mis-  
 understanding.

## D. Arnauld.

- I. Reid's interpretation = Arnauld inconsistent

= first maintains material reality to be immediate object of perception + again that ideas are immediate objects of perception.

- II. True account = Arnauld held finer form of mediate theory which Reid did not understand = therefore appeared to Reid to maintain immediate perception.

### E. Locke.

- I. Reid's interpretation = images conveyed to the brain + either there perceived by the mind or imprinted on the mind itself = this interpretation pronounced by Brown, Priestly and others to be incorrect.
- II. True account = Locke's language vacillating and confused + in "Examination of Malebranche's Opinion" he denies that secondary qualities can be mere mental modifications + *a fortiori* denies this of primary = holds the cruder form of representation.

### F. Hobbes.

- I. Reid's interpretation = attributes to him doctrine of representative ideas.
- II. True account = Hobbes was a material idealist = holds that all that we know is the phantasm within ourselves determined by some unknown motions which constitute the world without.

### G. Le Clerc.

- I. Brown's interpretation = Le Clerc held finer form of hypothesis + Brown charges Reid with adding nothing to it + says that it had prevailed in the schools.
- II. True account = Reid exploded this doctrine + it had not prevailed in the schools but the passage in Le Clerc adduced by Brown was an extract from Arnauld + Le Clerc himself opposed it.

Lec. XXIII.

II. Reid's own doctrine = whether did he hold natural Realism or the finer form of representation as Brown supposes? = if the latter his protest against idealism was futile and his philosophy a blunder.

A. Distinction between intuitive and representative knowledge = this distinction important + Reid, by his ignorance of it was led into confusion.

I. As acts :—

Immediate knowledge simple and consciousness simply contemplative + representative knowledge complex and consciousness representative and contemplative of the representation.

II. In relation to their objects :—

In immediate knowledge, object is single and term unequivocal + in mediate knowledge object two-fold and term equivocal = subject object + object-object.

III. As judgments :—

In immediate knowledge, cognition is assertory and existence of object unconditional + in mediate knowledge cognition problematical and reality of object a possibility.

IV. In relation to their sphere :—

Mediate knowledge exclusively subjective + immediate, either subjective or objective, mental or material.

V. In reference to their perfection :—

In immediate knowledge, the act is complete and absolute and the object real + in mediate, the act is incomplete and relative and the object ideal.

B. Grounds for holding Reid a representat-  
tionist.

I. Reason adduced by Brown = Immediate perception implies identity of matter and mind ;

but Reid denied identity of these; therefore did not hold immediate perception = refuted by shewing that major premiss is not valid, because

- a. Reid accepts fact that consciousness gives immediate knowledge of mind and matter.
- b. The denial of this fact leads to monism = immediate knowledge of two series of incompatible qualities the only ground of assuming two substances; but there is no such immediate knowledge; therefore there is only one substance = this conclusion repudiated by Reid, therefore he must repudiate the premiss.

II. Reid equalized perception and imagination = either holds simpler form of representative perception, or overlooked the distinction between immediate cognition or perception and mediate cognition or imagination.

c. Reason for holding Reid a natural realist = be maintained the following positions:—

- I. That the knowledge of external things is convertible with their reality = the reality must be known in itself.
- II. That the external reality is immediately known by the mind in the same way as the idea is in the representative theory.
- III. That mankind at large believe external object to be immediately known with which Reid agrees.
- IV. That perception gives equal evidence of the existence of external phenomena which consciousness does of internal = absolute certainly.

III. The distinction between perception and *sensa* Lec. XXIV. tion.

A. Historical account.

- I. In Descartes, Malebranche, Locke and Leibnitz Perception = Consciousness.
- II. In Reid, Perception = some notion or conception of object perceived + conviction of its pre-



sent existence + this conviction immediate and not the result of reasoning ; sensation = accompanies perception + a purely subjective feeling.

## B. Distinction and law.

I. Perception and sensation = special kinds of knowledge and feeling + always coexistent but distinct + knowledge objective and feeling subjective : perception = consciousness of an object different from self + sensation = consciousness of a subjective affection of pleasure or pain.

II. Law — Knowledge and feeling, perception and sensation though coexistent are always in the inverse ratio of each other.

## c. Proof of the law.

I. From comparison of the several senses.

A. In sight the objective element is at the maximum + the subjective at the minimum.

B. In hearing there is less extensive objective sphere + a more intensive subjective affection.

C. In taste and smell the pleasure and pain are great as objective information is small.

D. In touch, where sensation predominates perception is feeble + perception lively, sensation obtuse.

II. From comparing the several impressions of the same sense.

A. Difference in degree = above a certain limit perception declines as sensation rises + a certain quantum of sensation necessary to perception.

B. Difference in kind = in sight :—more sensation in colour ; more perception in figure + pleasure from colour more gross and vivid ; from figure more refined and permanent.

D. Importance of the distinction = seen only in natural realism + in representative theory perception is only apparently objective.

IV. Distinction between primary and secondary qualities.

A. History of distinction.



- I. Democritus denied any knowledge of the real qualities of body except through touch.
- II. Descartes = Primary qualities more clearly and distinctly known than secondary.
- III. Locke = Primary qualities are inseparable from body + like our ideas of them ; secondary are only powers to produce sensations in us + have no resemblance to our ideas.
- IV. Reid = Primary qualities more clearly known + in primary, perception is direct ; in secondary only relative.
- V. Stewart divides qualities into.
  - A. Mathematical affections,—extension and figure
  - B. Primary qualities involving the notion of extension, as hardness, softness &c.
  - C. Secondary qualities,—the unknown causes of known sensations + these are all reducible to extension and solidity.

B. Distinction fully stated (by Hamilton in his edition of Reid.)

- I. Foundation of distinction = space known *a priori* + a necessary form of thought ; extension *a posteriori* or empirical + objective.

II. Division of qualities.

(A.) Primary = with reference to sense objective not subjective + with reference to understanding essential to conception of body + may be deduced *a priori* from space.

- (I.) Body as occupying space gives rise to (1) Trinal Extension explicated into number, size and figure + (2) Ultimate Incompressibility.

- (II.) Body as contained in space gives rise to (1) mobility + (2) situation.

(B.) Secundo-Primary = with reference to sense objective and subjective ; with refer-

ence to understanding accidental + conceivable in their own nature + must be induced *a posteriori* + are modes of resistance or pressure.

(I.) Considered physically they are derived from :—

(A.) Co-attraction = heavy or light, hard or soft, firm or fluid &c.

(B.) Repulsion = compressible and incompressible elastic and inelastic &c.

(C.) Inertia = movable and immovable.

(II.) Considered psychologically they are divided :—

(A.) according to degree of resisting force

(B.) according to mode of affecting the sentient organism.

(C.) Secondary Qualities = purely subjective + occult and inconceivable in their nature + *a posteriori* = colour, sound flavour &c. heat, electricity &c. sneezing shuddering &c.

Lec. XXV.

V. Reasons for rejecting natural realism.

A. Perception as a cognition is *immanent* ; but the immediate perception of external objects implies a *transeunt* act ; therefore the mind must act, that is exist out of itself, which is absurd = refuted by three considerations :—

I. Immediate perception as a fact of consciousness cannot be explained.

II. The argument proves the impossibility of muscular movement.

III. Cosmothetic idealists must attribute to matter the same transeunt efficacy which they deny to mind, in order to explain perception.

- B. That which immediately knows must be of the same nature as that which is known ; but mind is not of the same nature as matter ; therefore does not immediately know it = this has given rise to all the theories of representation.

Refutation = this argument arbitrary and unphilosophical + we can know nothing *a priori* concerning mind + experience contradicts it.

- C. The mind can know only that to which it is immediately present ; but it is not immediately present to external objects ; therefore can only mediately know them.

I. This has been redargued in three ways :—

- A. External reality comes into the mind = Sergeant.
- B. Mind goes out to external reality = Empedocles Platonists, Stoics &c.
- C. The mind through divine agency, immediately knows external objects = doctrine of occasional causes = this is hypothetical, mystical hyperphysical and frustrates doctrine of intuitive perception.

II. The difficulty explained.

- A. We must not locate the mind at any particular place = it is present wherever we are conscious that it acts.
  - B. The material reality perceived = external reality under relation to our sense and faculty of cognition + in immediate contact with organ.
- D. The appearance size &c. of external objects change according to our distance and position ; but the real object does not change ; therefore we do not perceive the real objects, but only their images = Hume's objection.

Refutation = Real object of perception is in immediate contact with organ and does not change.

- E. The ego is endowed with will which tends towards objects of perception ; these there-

fore must lie within the ego ; but the external reality cannot be within the ego ; therefore the objects of immediate knowledge must be representations=Fichte's objection. Refutation.

- I. Cognition of objects external to ego is sufficient to excite and direct the will.
- II. The will is directed to the future which is mediately known = does not prove that present perception is mediate.

Lec. XX VI.

## VI. Reasons for rejecting the representative theory

- A. It is unnecessary = fact of consciousness not proved impossible + as ultimate must be inexplicable + hypothesis not clearer than fact=supposes that mind can represent that of which it is ignorant.
- B. Hypothesis subverts what it endeavours to explain = belies the testimony of consciousness.
- C. The fact proposed to be explained is rendered problematical by the explanation=hypothesis assumes the facts of the external world existing and mind knowing and then attempts to explain their correlation = reasoning in a circle = proves reality of external world from representation + supposes existence of world to account for representation.
- D. The hypothesis subverts the phenomenon to be explained = divides the fact of consciousness into two parts :— the immediate knowledge by the ego ; and the existence distinct from the ego = this involves the destruction of the phenomenon.
- E. The fact to be explained,—the external world is beyond the sphere of experience.
- F. The hypothesis depends upon subsidiary hypothesis and miracles.

## VII. General questions connected with perception.

- A. Do we first know whole or parts ?

- I. Latter alternative supported by
  - A. Stewart = involved in his doctrine that we can attend to only one thing at a time.
  - B. James Mill = perception of wholes explained by the association of particular sensations.
- II. Former alternative true = we know the wholes better than the parts.
- B. May all the senses be analyzed into touch Lec. XXVII.  
= affirmative held by Democritus = correct, if by touch is meant contact of external object with organ of sense.
- C. Does touch comprehend a plurality of senses?
  - I. Themistius = touch comprehends a plurality of senses = followed by many schoolmen, who did not agree as to the number of special senses.
  - II. Cardan distinguishes four senses of touch or feeling.
  - III. Kant = a vital sense, comprehending heat, cold, shuddering &c. + an organic sense including the ordinary five senses.
  - IV. Hamilton, adopts Kant's division and supports it by showing,
    - A. That the distinction between touch and sensible feeling is founded upon the former being more objective and the latter more subjective.
    - B. That there is nothing similar in the two except their having no special organ.
- D. Does sight give an original knowledge of extension?
  - I. Aristotle = colour the proper object of sight + extension involved in the perception of colour.



ii. Berkeley = colour and extension are not naturally connected, but only by association = followed by Condillac Stewart and the Hartleian school.

iii. Brown = the mere fact of a sensation covering the extended retina does not necessarily involve the notion of extension + that notion cannot arise unless it is already known that the colour is diffused over part of our extended body + nothing but muscular effort can give idea of external body at all.

iv. Hamilton = all agree that we see colour + this involves difference of colours + colours discriminated are placed side by side + the contrasted colours will thus form a line or figure = vision gives us an original notion of extension.

v. D'Alambert = sight alone, independently of touch, gives the notion of extension.

#### Lec. XXVIII.

E. Does touch alone give an original knowledge of extension.

i. Platner = not touch but sight alone = in a person born blind there is no notion of extension + time serves instead of space + difference of feeling not difference of position serves to distinguish objects.

ii. Hamilton supports Platner's doctrine.

A. A blind-folded person is unable to form a correct idea by touch of the figures and positions of objects.

B. The young man couched by Dr. Cheselden could not recognise objects by sight which

he had formerly known by touch + by sight  
 he could not perceive externality of objects,  
 which he ought to have done if by touch  
 he had formerly acquired an idea of extension.

F. How do we obtain our knowledge of visual distance ?

I. Berkeley = it is acquired by experience and association.

A. Moderate distances require adjustment of eyes = corresponding sensations are associated with particular distances.

B. In the case of great distances the axes of the eyes are parallel = distances associated with size of objects, clearness or obscurity, number of intervening objects &c.

II. Apparent objection = the young of lower animals appear to have instinctive perception of distances.

VIII. Difference between author's doctrine and Reid's.

A. Reid holds distant objects to be perceived + Hamilton maintains that in all the senses the object of perception is in immediate contact with organ.

B. Reid and other philosophers hold that an organic action must precede the intellectual action in perception + Hamilton = if this were so the immediate perception of an extra-organic object would be impossible + corporeal movement and mental perception simultaneous + mind connected with the whole nervous system.

C. Reid and Stewart = sensation proper always precedes perception proper = if so,

perception is only an instinctive belief, consequent on sensation, that there is some unknown quality, the cause of the sensation + Hamilton = perception proper and sensation proper coexist.

Lec. XXIX.

## B. Self-Consciousness.

### I. Its character and forms.

- A. Contrasted with perception = perception embraces the phenomena of external world + its forms are space and time ; Self-consciousness comprehends the phenomena of internal world + its forms are time and self.
- B. Forms = the frame or the *a priori* conditions apart from which no objects can be known = necessary and native to the mind = time, space and self = the fact of space being a form of perception does not involve the extension of the mind.

### II. Modes of studying self-consciousness.

#### A. Described.

- i. Induction alone = comparison and classification of mental phenomena = results in the *general* not the *necessary*.
- ii. Induction + analysis = besides comparing and classifying phenomena, analyses them into necessary and contingent elements = this necessity governs thought only not things.

#### B. Illustrated from the history of philosophy.

- i. Doctrines of philosophers.

- a. Locke used induction alone = discovered nothing necessary = all axioms are generalisations from experience.
  - b. Leibnitz = there is necessary truth not obtained by empirical induction but involved in the structure of the mind.
  - c. Kant = first clearly showed the *a priori* character of necessary truth.
- II. Has Locke been misrepresented?
- a. Stewart = Gassendi, Condillac, Diderot and Horne Tooke held all our knowledge to be derived from sense + Locke held reflection also to be an original source of ideas = Locke misrepresented by his French followers.
  - b. Hamilton = Locke's reflection concerned only about contingent objects of sense = similar to doctrine of Gassendi who assigned to reflection a higher function than Locke giving it more spiritual objects = Locke not misrepresented

## II. The Conservative Faculty.

Lec. XXX.

- A. Introduction = conservation necessary to the possession of knowledge + conservation of knowledge would be useless without the power of reproducing and representing it in consciousness = these faculties though mutually dependent are distinct = in the language of philosophers the conservative faculty proper is called *Memory*, the reproductive faculty, *Recollection* or *Reminiscence*.
- B. The fact of retention explained.
  - 1. Illustrative similes.

- A. Cícero call memory a storehouse provided with cells.
- B. Gassendi compares it to the folds in a peice of paper or cloth.

II. Psychological explanation = memory the necessary result of the self-activity of the mind.

- A. Real problem = not how a mental activity endures but how it ever vanishes.
- B. Forgetfulness explained by distribution of mental force = the greater the number of mental activities, the less the proportion of force in each = some activities thus become delitescet or latent
- C. Distraction and attention explained by same principle = the want of attention causes different degrees of obscuratión.
- D. Results of preceding theory.
  - I. Memory extends to cognitions, feelings conations and all mental states or activities.

II. Physiological hypotheses useless = betray ignorance of true nature of thinking principle = self-activity of mind independent of bodily relations.

C. Concluding remarks.

- I. Conditions of a good memory = capacity of retention + faculty of reproduction.
- II. Two incorrect opinions.
  - A. Great memory incompatible with great intelligence = proved false by history = Scaliger and others had great memory and great philosophical power.
  - B. Great intelligence incompatible with great memory = refuted by common sense.



A. Historical introduction = all admit that mental phenomena are reproduced according to the laws of Association = thoughts retained in memory are excited by their connection with other thoughts according to certain laws.

I. The Laws of Association are seven in all :—

- A. Thoughts originally coexistent or immediately successive suggest one another.
- B. Things contiguous in space suggest one another.
- C. The cause suggests the effect, the whole the part.
- D. Things contrasted or similar become associated.
- E. Operations of the same power or of different powers about the same object are associated.
- F. The sign suggests the things signified.
- G. Things denoted by the same sound are mutually suggestive.

II. Aristotle reduced all laws to three = contiguity in time and space + resemblance + contrariety.

III. St. Augustine reduced all to one = thoughts which have coexisted in the mind are afterwards associated.

IV. Hume admitted three = resemblance + contiguity in time and space + cause and effect.

V. Stewart classified the laws into :—

- A. Relations perfectly obvious = resemblance and analogy, contrariety, and vicinity in time and place.
- B. Relations not obvious = cause and effect, means and end, premisses and conclusion.

VI. Brown distinguished.

- A. Primary laws of suggestion = resemblance, contrast and contiguity.
- B. Secondary laws = vicinity, recentness &c.

## B. Reduction of all laws to one.

- I. All laws reducible to simultaneity and affinity.
  - A. Simultaneity = coexistence or immediate succession.
  - B. Affinity is a comprehensive expression for all the others.
    - I. Resembling or analogous objects have a natural affinity.
    - II. Contrasted objects have affinity because the knowledge of contraries is one.
    - III. Local contiguity gives unity to unconnected objects.
    - IV. In the case of whole and parts, sign and thing signified, a thing and its properties there is a connection both of affinity and simultaneity.
    - V. Cause and effect stand in the closest affinity.
- II. Simultaneity and affinity both reducible to one grand law of Redintegration, = Those thoughts suggest one another which had previously constituted parts of the same entire or total act of cognition = the parts of a total act of thought consist of simultaneous thoughts and those having mutual affinity.
- III. Apparent exception [to laws = thoughts apparently unconnected sometimes succeed one another = explained by mental latency + cannot be explained by forgetfulness of intermediate link.

## C. Reminiscence = laws of reproduction + Lec. XXXII.

voluntary effort = implies that the mind recognise the identity of the reproduced immediate and the original phenomenon + that the mind be conscious of the second being something different from the first = the common explanation of reminiscence recognises only the consecutive order of thought + the following points constitute the true explanation.

I. The mind goes backward and forward over a great variety of thoughts in every order.

## II. Conditions of reminiscence.

A. Momentary circumstances are the causes which awaken our activity.

B. The determining circumstances as constituting a *want* tend to awaken associated thoughts which may satisfy that want.

III. Consciousness of a want awakens the idea of its object together with many accessory notions + accessory ideas not so vivid as that of object sought and therefore soon disappear from consciousness.

IV. These accessory notions whether conscious or not call up others and so help to bring before consciousness the object wanted.

V. Relations of our thoughts as suggesting one another.

A. Some thoughts reciprocally connected by mutual relations and therefore excite one another.

- B. Some are connected with a greater number of determining circumstances than others = these are more frequently called up.
- C. Thoughts connected with circumstances which most vividly affect us predominate over the others.

Lec. XXXIII. IV. The Representative Faculty,—Imagination.

A. Its character and conditions.

- I. Erroneous view = imagination divided into the reproductive and productive.

- a. Reproductive = called conception + simply representative of objects of perception = term *conception* improperly applied + the faculty not simple, comprehending representation proper and reproduction.

- B. Productive = ordinary imagination or Fancy = produces nothing new,—only rearranges and modifies the old.

- II. Correct view = imagination a complex process, comprehending representation + its determining powers.

- a. Representation = energy of mind in holding up to its own contemplation mental phenomena.

- B. Determining powers = reproductive faculty,—the immediate source of materials + faculty of relations,—analysis and synthesis of phenomena  
Hence .—

- C. Representation = condition of the possibility of an act of comparison + realizes or holds up results of comparison.

B. Its objects = imagination is concerned not merely with objects of sense but also with the objects of abstraction, of wit, of judgment, of reason, of feeling, of volition, and of the passions.

C. Its order,—is three-fold.

- I. Natural order = that in which objects spontaneously present themselves.
- II. Logical order = order of scientific study = from universal to particular or *vice versa* = deductive or inductive.
- III. Poetical order = grouping with a view to effect.

D. Its modes.

I. Ordinary modes = the mode of imagination determined by different associations in different circumstances = education, habits, religion, age, and sex determine the kind and order of imagination.

II. Extraordinary modes.

- A. Dreaming = exercise of imagination during sleep = can sometimes scarcely be distinguished from sensible perceptions or waking thoughts.
- B. Somnambulism = extraordinary exaltation of powers during sleep + subsequent forgetfulness of what was done.
- C. Reverie = waking dreams governed by the involuntary associations of imagination.

E. Its effects = it is the principal source of the happiness and misery of human life.



F. Its organs = the different organs of sense or muscular activity are employed by imagination.

Lec. XXXIV. V. The Elaborative Faculty. This faculty proceeds exclusively by the method of comparison as may be seen by examining its principal processes.

A. Primary acts of comparison.

- I. Comparison of ego or non-ego with notion of existence.
- II. Discrimination of ego from non-ego.
- III. Observing the resemblance or difference of phenomena.
- IV. Comparison of phenomena with native notion of substance.
- V. Comparison of phenomena with notion of causality.

B. Classification or Generalization = grouping together resembling phenomena as the result of comparison.

I. Products of classification.

A. Complex notions = repetition of the constituent notion so as to form a group as *army*, *forest* = aided by language which gives unity to the collections of objects.

B. Notions formed by decomposition.

- I. A Poetical analysis and synthesis = separation and recomposition of integral parts for the sake of pleasure.

II. Scientific analysis and synthesis = abstraction and combination of constituent qualities for the sake of accurate knowledge.

A. Abstraction = withdrawal of attention from some qualities to fix it upon others = may be performed by the senses upon physical qualities or by the mind upon reproduced cognitions.

B. Abstract individual ideas = particular qualities of individual objects separated from the others.

C. Abstract general notions = produced by attending to and naming points of resemblance in a number of objects, and thus forming a class, and successively higher classes.

I. Quantity of general notions two-fold = extension, — the classes or objects contained under them + comprehension, — the attributes involved in them = extension and comprehension are in the inverse ratio of one another.

II. Resolution of quantity is two-fold = *generalization* or rejection of differentiae and attention to resemblances, the process rising from individuals to higher and higher classes + *determination*, or attention to differences and abstraction from resemblances, the process descending from higher classes to lower or to individuals.

II. Wherein does generality consist? = the answer to this question involves an account of the nominalist controversy. Lec. XXXV.

A. Nominalism = every act and object of thought singular + the name only is general = held by Hobbes, Berkeley, Hume, Adam Smith, Campbell and Stewart = mind can abstract from *particular* qualities of objects + cannot conceive a general notion apart from particular qualities.

B. Conceptualism held by

I. Locke = the *general notion* of an object without special peculiarities may be formed, but it is imperfect.

II. Brown = generalizing process consists of (1) perception or conception of two or more objects + (2) relative feeling of their resemblance + (3) naming these circumstances of resemblance = nominalism excludes the relative feeling of resemblance. Brown incorrect, for,

A. Nominalists do not exclude resemblance in generalization, as *e. g.*

I. Hobbes = name imposed for similitude in some quality or accident.

II. Berkeley = words become general by being applied to particular ideas which resemble one another.

III. Hume = perceived resemblance is the foundation of classification.

IV. Adam [Smith] = resemblance the reason of giving a common name.

B. Notion of similitude not general.

I. Axioms.

a. Resemblance is a relation = inconceivable apart from resembling objects.

b. Resemblance exists in some particular mode or accident.

c. Resemblance not necessarily universal = not more general than resembling objects.

II. Brown's theory tested by axioms.

a. Universality of feeling cannot arise from universality of resembling objects.

b. Nor can it arise from the universality of the notion of the common quality.

c. Hence it must be supposed by Brown to rest in the feeling of resemblance itself in opposition to the third axiom + there are four conceivable reasons in support of this

1. The feeling of resemblance may be general because it is a relation = not asserted by Brown.

2. The particular relation called similarity may be more general than other relations = it is the same as that of difference which is not general.

3. The feeling of similarity may be general because we have a capacity of feeling similarity = then every act of every power would be general.

4. If universality be not in sensible representations it may be found in the intellectual notion which connects two particular qualities by the bond of similarity = the only supposition which accounts for Brown's doctrine [but which he was not warranted in assuming.

### III. What kind of idea and terms first arise ? *Lec. XXXVI.* = the question of the *Primum Cognitum*.

A. That first ideas and names are of particular things is held by —

I. Vives = the order of learning is from simple to complex, from particulars to universals.

II. Adam Smith = assignation of particular names to particular objects is the commencement of language + these names are afterwards extended to other resembling objects and thus become general.

B. That general ideas and terms first arise is held by :—

I. Leibnitz = it would be impossible to speak without appellatives, *i. e.* names which may be applied to several objects + general name usually most easily formed + proper name originally appellative or general.

II. M. Turgot = our first ideas are general and afterwards become more particular.

C. That first ideas and terms are vague and confused is held by

I. Hamilton = language at first expresses the the vague and confused + out of this the universal and particular are elaborated = perception commences with masses, and proceeds by analyses from the vague to the definite + general attributes are formed by comparison

and attention + individuals distinguished by discrimination of differences.

II. Degerando = a child first uses nouns and verbs absolutely and afterwards compares and distinguishes.

III. Aristotle = we proceed from the better known to the less known = from the complex or confused to the singular and clear.

Lec. XXXVII.

C. Judgment and Reasoning = rendered necessary by the imperfection of our nature; higher intelligences know by intuition.

I. Judgment = an act of comparison = of a total conception with a partial + recognition that the latter constitutes part of the former = consists of subject, predicate and copula + expressed in words is called a proposition.

II. Reasoning = complex or mediate judgment = recognition of the relation of one notion to another through a third = proceeds either from the whole to its parts, or from all the parts to the whole collectively = deductive and inductive.

A. Deductive reasoning = depends upon the axiom,—Whatever is the part of a part is a part of the whole = the subject may be the whole and predicate part, or predicate whole and subject part = comprehension + extension.

I. Reasoning in comprehension = subject whole and predicate part = subject may be either a physical or a mathematical whole = depends upon principle that,—all that belongs to the predicate must belong to the subject.



II. Reasoning in extension = predicate whole and subject part = what was subject in comprehensive reasoning becomes predicate in extensive.

III. In both deductive and inductive reasoning the inference is *necessary* = usual account of induction as probable reasoning erroneous + in deduction and induction, the analysis of comprehension is exactly the reverse of the analysis of extension = in deduction the analysis of comprehension corresponds to the synthesis of extension and *vice versa* + inductive synthesis on a comprehensive whole the reverse of that on an extensive whole.

## VI. The Regulative Faculty.

### A. Introductory discussion.

I. General character of the faculty = it is the power possessed by the mind of modifying or regulating the knowledge it receives = the complement of *a priori* principles belonging to the mind. Lecture XXXVIII.

II. Its nomenclature = it corresponds to the Greek, *nous* or *Reason* + has been called *common sense* by many authorities which is ambiguous = it usually means a sound understanding.

A. The faculty may be called the *noetic* to distinguish it from the Elaborative faculty or *dianoetic*.

B. The cognitions are called first principles, principles of common sense, intuitive truths &c.

III. Its criteria enounced by :—

A. Descartes and Spinoza = Descartes distinguished

*universal* from particular notions + Spinoza pointed out that our clear and distinct ideas follow from the sole necessity of our nature = these philosophers were not explicit.

B. Leibnitz = native distinguished from adventitious knowledge by the circumstance that we cannot but think the one, but may easily annihilate the other in thought + the intellect is the source of necessary truths while contingent truths come from experience + experience apart from reason never leads to absolute universality.

C. Reid illustrates his doctrine by the principle of causality which cannot be acquired or proved by experience because

I. The causal judgment expresses not a contingent but a necessary truth.

II. Maxims grounded on experience have a probability only proportioned to the extent of our experience.

III. Limited experience inadequate to the establishment of a universal principle.

IV. The number of primary truths = still subject of dispute + Reid and Stewart charged with admitting too many + metaphysics like chemistry,—apparently simple elements may be analyzed.

B. Systematic deduction of necessary principles.

I. The quality of necessity distinguishes native from adventitious elements of knowledge + necessity may arise from two causes = may be the result of a power or of a power-

lessness of thinking principle = positive or negative.

- II. Positive necessity = an act power = *e.g.* affirmation of existence, personal identity, the laws of contradiction, excluded middle &c.
- III. Negative necessity = result of a powerlessness of mind.

A. Principles on which it depends.

- I. Law of contradiction = a thing cannot be and not-be at the same time.
- II. Law of excluded middle = a thing either is or is not.

B. Law of the Conditioned = all that is conceivable in thought lies between two inconceivable extremes which, as contradictory of each other, cannot both be true, but of which, as mutual contradictories, one must.

C. Illustrations of this law.

- I. Space as a maximum = space must be either finite or infinite + we cannot conceive space as positively limited since this would be contradictory of our idea of space + we cannot conceive space as without limits, since this surpasses our power of conception + therefore our power of conception lies between the two unconditioned extremes.
- II. Space as a minimum = we can neither conceive an absolute minimum of space nor its infinite divisibility.
- III. Time as a maximum = past or future time is bounded by the present = a bounded infinite is a contradiction + we cannot conceive past time as either infinitely not-beginning or absolutely beginning, nor future time as either infinitely not-ending or absolutely ending.

IV. Time as a minimum = we can neither conceive an absolute minimum of time nor its infinite divisibility.

D. General Summary = the conditioned is the mean between two exclusive extremes neither of which can be conceived as possible, but of which, on the principles of contradiction and excluded middle, one must be admitted as necessary = the two extremes are the absolutely unconditioned or absolute + the infinitely unconditioned or infinite = the conditionally limited is the only possible object of knowledge or of positive thought + this law consistent with the orthodox doctrine that we cannot know God.

Lec.XXXIX.

C. Application of the Law of the Conditioned to the explanation of the principle of causality.

I. The phenomenon of causality.

A. General account of it = we cannot conceive any new existence to commence + all that now exists had a previous existence under a prior form + the causes contain all that is contained in the effect + effect contains nothing which was not contained in the causes.

B. Brown's account of it = the causal judgment asserts present immediate priority + past and future invariable sequence of one event upon another. To this account Prof. Wilson objects that it omits two ideas;—one of necessity and the other of a constitution of things in which that necessity is established.

## II. Theories in explanation of the causal judgment.

A. A posteriori theories = those which consider this principle to be derived from experience.

### I. Original or primitive.

a. We have a direct perception of causal agency in external phenomena. To this it is objected:—

1. We have no perception of the connection of cause and effect in the external world = this objection first urged by Algazel in the 12th cent. and now generally accepted.

2. If we had this could not account for the qualities of necessity and universality.

b. We have a direct perception of causal efficiency in the consciousness of our physical operations as influenced by the will = in effort there is,—(1) the consciousness of an act of will (2) the consciousness of a motion produced (3) a relation of the motion to the volition = Locke and M. de Biran objected that we have no consciousness of the connection between the volition and the limb moving, as proved by paralysis where there may be a volition without movement + empirical consciousness would still fail to account for necessity.

### II. Derivative or secondary.

c. The causal judgment the result of induction and generalization = this would never engender the irresistible belief that every event must have a cause.

d. The causal judgment derived from subjective custom or association = the customary can never become the necessary.

B. A priori theories = those which consider the causal judgment a condition of intelligence itself.

### I. Original or primitive.



- e. The causal judgment is a simple primary datum, — a positive revelation of intelligence = Descartes, Leibnitz, Reid, Stewart, Kant, Fichte, Cousin &c. = cannot be held if the causal judgment may be explained — without postulating a special principle.
- f. The causal judgment may be resolved into the instinctive inclination to believe in the constancy of nature = held by Brown but does not account for element of necessity.

## II. Derivative or secondary.

g. The Causal judgment proved by the principle of contradiction = whatever is produced without a cause is produced by nothing; but nothing can no more be a cause than it can be something; therefore everything must have a real cause for its existence = held by the Leibnitz-Wolffian school but guilty of the fallacy *petitio principii* = if all causes are excluded 'nothing' should be excluded also.

Lec. XL.

h. The causal judgment evolved from the law of the conditioned.

1. Manner of evolution explained = all thought implies — the thought of existence + the thought of time + that of existence conditioned in time = we must think an object which exists now as having existed in past time and as continuing to exist in future time = we cannot conceive either absolute creation or absolute annihilation = the inability of annihilating in thought an existence in time past explains the whole phenomenon of causality + the judgment is simply the assertion that every thing must have existed previously in different forms.

2. Reasons for preferring this explanation.

- i. It postulates no new principle.
- ii. It averts scepticism = avoids the contradictory assertions, that existence cannot absolutely commence and cannot infinitely not-commence by showing that both of these assertions are the result of the limitation of our faculties.
- iii. It avoids fatalism or inconsistency = the denial of free causation in volition leads to fatalism or atheism + the admission of free causation in volition is inconsistent with the causal judgment +

the law of the conditioned obviates this contradiction by showing that both positions are unthinkable while in favour of freedom we may then appeal to consciousness.

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## PART VI.

### THE FEELINGS.

#### A. Preliminary questions.

Lec. XLI,

I. Are the Feelings really distinct from the other phenomena of the mind?

##### A. Historical notice of question.

- I. In ancient philosophy mental phenomena were divided into Gnostic or Cognitive + Orectic or Appetent = the modern division into understanding and will.
- II. Previous to Kant, German psychologists had distinguished the Feelings as a separate class but Kant first established the distinction.

##### B. Determination of question.

- I. Preliminary difficulty = language applied to mental phenomena not so clear and distinct as that applied to external objects + this led to confusion in the analysis of mental phenomena = the word *feeling* in many languages means first tactual sensations and afterwards pleasure and pain + this ambiguity leads to the secondary meaning of the word being supposed the same as the primary.
- II. By an appeal to experience we can easily distinguish the feelings of pleasure and pain from any cognition or conation.

## C. Krug's objection.

I. Stated = all activity of mind is directed either inward or outward + if feeling be distinct from these two activities it must have either both directions at once or none at all = must have either be a combination of the other two powers or nothing at all.

## II. Answered.

A. There may be three mental energies = ineunt or cognitions + immanent or feelings + transeunt or conations.

B. It is not proper to ascribe any direction to purely mental powers, direction and position being attributes of external objects.

C. The objection rests on the analogy between the mental and material worlds which does not afford ground for the argument.

## II. What is the position of the Feelings in a scientific classification of the faculties?

A. The Feelings are to be placed after the cognitions = without cognition no feeling is possible.

B. The Feelings precede and determine the conations = if cognition alone were sufficient to arouse conation, then :—

I. We should strive after all objects alike without distinction.

II. All persons would seek with equal eagerness after the same objects = the distinction which each person and several persons make

in seeking after objects of desire is explained by the feelings.

III. Into what classes should the Feelings be distributed ?

A. Kant divides the Feelings into two great classes.

I. The sensuous feelings = through the senses + through the imagination.

II. The intellectual feelings = connected with notions of the understanding + ideas of the reason.

B. Schulze, into corporeal, spiritual, and mixed.

C. Hildebrand, into feelings of states, conditions, and appetency.

D. Herbert, into objective, subjective, and mixed in origin.

E. Carus, into intellectual, æsthetic, moral and religious.

F. Hamilton, into sentiments and sensations.

B. Theory of Pleasure and Pain.

Lec. XLII.

I. Feelings distinguished from other phenomena.

A. Cognition = object known distinguished in consciousness from subject knowing + object may be different from ego,—object-object, or a modification of ego,—sub-

ject-object = objectification is the essential peculiarity of cognition.

- B. Feeling = does not objectify mental modification or state = is nothing but what is subjectively subjective.
- C. Conation = related to an external object like cognition + relation implies a want and a tendency resulting in an endeavour + conation has reference to the future, feeling to the present.

## II. Law by which the Feelings are governed.

### A. Stated in detail.

- i. The life of man corresponds to his conscious energy.
- ii. Conscious energy is determined through special modes without which it cannot be exerted.
- iii. Pleasure and pain accompany exertion in these modes.
- iv. Since pleasure or pain cannot arise except as the concomitant of some conscious energy the question arises as to the law of their connection.
- v. The Law is,—The more perfect, the more pleasurable the energy; the more imperfect the more painful.
- vi. The perfection of an energy is.
  - A. A relation to the power.
  - B. A relation to the object.



## VII. In relation to the power.

- A. A perfect energy = the full and not more than full complement of free and spontaneous energy of the power in regard to degree and duration.
- B. An imperfect energy = the restrained or the over-stimulated exertion of a power.

## VIII. In relation to the object.

- A. A perfect energy = object elicits the full and not more than full amount of energy.
  - B. An imperfect energy = object stimulates energy unduly in degree or time + unduly restrains it.
- IX. Pleasure is a reflex of the spontaneous and unimpeded exertion of a power of whose energy we are conscious + pain is a reflex of the over-strained or repressed exertion of such a power.

## B. Explained.

- I. Pleasure as *reflex* of energy = distinguished from *energy* which may not be pleasurable + from *perfection of energy*.
- II. *Spontaneous* = every power should put forth freely and naturally its proper amount of energy + *unimpeded* = all obstacles should be removed.
- III. *Consciousness* a condition of feeling = no feeling out of consciousness + pleasure and pain may be either negative or positive.

## C. History of Theories of Pleasure and Pain.

Lec. LXII L.

- I. Plato was the first to generalize a theory of the Feelings = a state of pleasure always

preceded by a state of pain + pain arises from a breach in the harmony of our constitution + pleasure follows when the harmony is restored = pleasure is a thing always in generation never actually existing,—a mere relation to and negation of pain + pain is the root the antecedent of pleasure.

- II. Aristotle refutes the Platonic theory of pleasure being a mere negation by showing that this theory explains only bodily wants and pleasures + intellectual pleasures are positive and not accompanied by pain = pleasure is the concomitant of a perfect energy of health or intellect exercised upon an object suited to call forth the power into unimpeded activity + pleasure is not something that arises from moment to moment but is a real positive existence. Hamilton in comparing the above theories observes :—Plato is right in holding that every state of pleasure and free energy is the escape from an alternative state of pain and compulsory inaction + Aristotle is right in holding that pleasure is more than freedom from pain = pleasure and pain are both absolute in being both posi-

tive + both relative in being increased by contrast with one another.

III. Cardan = All changes proceed from one contrary to another, from good to bad or from bad to good = the latter pleasurable = a state of pain must always precede one of pleasure = this theory excludes intermediate gradations of feeling.

IV. Descartes = Pleasure is the consciousness of some one of our perfections = supposed by his followers to have been original but really a vague version of Aristotle's theory.

V. Wolf = Pleasure is the intuitive cognition of any perfection whatever either true or apparent = this theory is erroneous because ;—

A. Pleasure is a subjective state not a cognition of an attribute.

B. Pleasure belongs not only to the intuitive faculty but also to the understanding or faculty of relations.

VI. Du Bos and Pouilly = Pleasure subjectively is the result of the gratification of a want + the chief want is mental occupation + mental activity when over stimulated or restrained is painful + the stronger and easier the activity the more agreeable.

VII. Sulzer = The feelings are grounded in the natural activity of the soul + this activity is pleasurable when called forth by objects in which diversity may be reduced to unity + beauty consists in the unity of the manifold = to this theory it may be objected.

A. This theory excludes the pleasure of receptivity or passivity.

B. Pleasure is not a consciousness of unimpeded activity but a consciousness of feeling.

VII. Kant = Pleasure is the feeling of the furtherance, pain of the hinderance of life + former must pre-suppose the latter + man is always dissatisfied with the present and seeks to better his condition = man is always seeking to escape from a state of pain to one of pleasure + pleasure is nothing positive, only a negation of pain, and nothing enduring, only a transition.

Lec. XLIV. **D.** Application of Theory to phenomena.

I. As *causes* states of feeling may be either pleasures or pains = pleasure is felt in proportion as our powers are exercised but not over-exercised + pain, in proportion as they

are compelled either not to operate or to operate too much.

A. Testimony showing that activity is pleasurable.

- I. The love of idleness or learned leisure is not idleness, but bodily inactivity accompanied by mental activity + *ennui* is painful.
- II. Many writers — as Johnson Ferguson, Paley have shown the pleasure of activity + all young animals delight in the activity of their powers while the old are pleased with ease.
- III. Even the affections which are of a painful kind are accompanied with a certain amount of pleasure, as *e. g.* grief, fear, pity.

B. General causes determining the degree of pleasure and pain.

- I. Novelty is a cause of a higher feeling of pleasure.
  - A. Subjectively, as it determines the mind to a new mode of action either from inactivity or from another state of energy.
  - B. Objectively, as it affords gratification to our desire of knowledge.
- II. Contrast enhances the real as well as the apparent intensity of a feeling.
  - A. Unkindness from a person from whom we expect kindness increases the real pain.
  - B. Recollection of past suffering or past happiness increases present feelings + comparison of our condition with that of others increases our feeling of pleasure or pain.



- III. Harmony = when different feelings are harmonious, they enhance pleasure + when they are discordant they produce pain.
- IV. Association pre-supposes, does not create feeling + by connecting ideas with objects makes them appear pleasurable or painful although they would not otherwise be so.

Lec. XLV.

II. As *effects* states of feeling may be connected with every kind of activity.

A. Sensations have certain feelings connected with them.

I. The five senses or *sensus fixus* = we must distinguish the organic pleasure or pain connected with these senses from the higher pleasures resulting from the imagination working upon the objects of the senses = the degree of organic feeling determined by the general law of perception and sensation. — Pleasure or pain varies directly as the sensation and inversely as the perception = in sight and hearing there is little susceptibility of organic feeling, in taste and smell — great + no law can explain the causes of particular feelings.

II. The vital sense *sensus vagus* = Hamilton thinks the general law applies to it but does not enter into details.

B. Sentiments, connected with the higher faculties.

I. Contemplative = concomitants of our cognitive powers.

- A. Sentiments attending self-consciousness = pleasurable when there is vigorous and unimpeded energy + painful when there is no cause for one present state of activity to pass into another, as in tedium or *ennui* = a repressed tendency to action felt chiefly by the educated + cured by pastimes or occupation + too rapid change of our activity is accompanied by dizziness or nausea.
- B. Sentiments connected with imagination.
  - i. Reproductive imagination, when its object is clearly and vividly brought before consciousness gives pleasure, and *vice versa* + an external object which gives full play to imagination by presenting variety combined with unity is beautiful and gives pleasure.
  - ii. Creative imagination = reconstructs old materials into new forms either in one or a series of representations = pleasure arises from a varied and harmonious image + from the logical dependence of representations upon one another = pleasure comes from extending our knowledge + from clearness and distinctness in our cognitions + from the conviction of the truth of our opinions + from ease in detecting unity in variety of objects + from induction of general laws and deduction from first principles + from the perception of the adaptation of means to ends.
- C. Sentiments arising from the union of the understanding and imagination. Lec. XLVI.
  - i. The Beautiful = Kant distinguishes beauty into absolute and relative = that which is beautiful in itself, as a flower + that which is judged beautiful by reference to a certain end = relative beauty is nothing but utility,—a beautiful utility or a utilized beauty.
    - A. Absolute beauty gives pleasure in proportion as it affords to the imagination and the under-

## THE FEELINGS.

standing the opportunity of exerting fully and freely their respective energies = the understanding gathers up into a unity the objects of the imagination = pleasure is in proportion to the ease with which the understanding performs its functions + there is no pleasure in sundering a whole into its parts + there is pleasure in dividing a whole into its lesser wholes.

B. Relative beauty gives a double pleasure = that which arises from the absolute beauty of the object + that which arises from the notion of conformity to an end = *the beautiful* is that which occupies the imagination and understanding in a free, full and agreeable activity.

II. The Sublime = rouses strong emotion + partly repels = is mingled pleasure and pain + requires magnitude as its condition.

a. Of extension and protension, or of space and time = comprises so great a multitude of parts that the imagination sinks under the attempt to represent it in an image, and the understanding, to estimate it.

b. Of intension = power so great that imagination cannot represent and understanding cannot measure it.

III. The Picturesque = variety which allows the mind to expatiate freely and easily without attempting painfully to reduce it to unity.

II. Practical Sentiment relate to

- A. Self-preservation.
  - B. Enjoyment of existence.
  - C. Preservation of the species.
  - D. Tendency to developement or perfection.
  - E. The moral law.
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NOTES  
EXPOSITORY AND CRITICAL.





## NOTE A.

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### THE RELATIVITY OF KNOWLEDGE.

THE doctrine of the Relativity of knowledge, or more properly the relativity of the objects of our knowledge, holds a prominent position in Sir William Hamilton's Lectures upon Metaphysics. In this Note three things are proposed:—1st, To examine the subject of relativity, noting a certain impropriety of the language generally employed to describe it, and indicating what is properly meant by the doctrine; 2nd, To discuss Sir William Hamilton's statement of the doctrine; and 3rd, To compare his doctrine of relativity with another of his doctrines alleged to be inconsistent with it.

I. All the objects of our conscious knowledge exist in certain relations, and a study of these relations is needful for a clear understanding of the doctrine of relativity. From the sphere of consciousness we must manifestly exclude the Distant and the Past or Future. It is only mental phenomena *Now* and *Here* which consciousness comprehends. This principle follows immediately from the nature of consciousness. The inner light by which the workings of our mind are revealed to us comprehends nothing but its own constituent elements, of whatever nature these elements may be; but the Distant and the Past or Future cannot, except by proxy, be included in these elements. We do, however think of the distant in space and time, and therefore by proxy, it must be present in our conscious life. The contents of consciousness appear therefore to divide themselves into two classes:—those which are

primitively *now* and *here*; and those which are the proxies of the *distant* either in *space* or *time*. These two classes we shall call *Presentations* and *Representations*. These two classes of mental phenomena are sometimes not easily distinguishable, and are frequently quite inseparable in their union the one with the other. Presentations however may, generally, be thus characterised: they are accompanied or preceded by some organic or objective conditions, and have not a necessary reference to any other phenomenon past or present or future. Representations, on the other hand, involve of necessity a reference to some presentation either past or future, or usually some presentation actual in the past and possible in the future. All the contents of consciousness must necessarily belong to one or the other of these two classes, as every phenomenon must either be absolute and complete in itself, or must involve a reference to some other possible phenomenon.

The presentations and representations of our conscious life appear in consciousness in a state of great complexity, arising from their great number and variety, as well as from the intricate manner in which they are united together. But there are four great Relations in which all the objects of consciousness must stand to one another. These relations are *Difference* and *Resemblance*, *Coexistence* and *Succession*. If objects of consciousness do not *differ* we cannot discriminate the one from the other, that is, cannot know them at all. If a representation do not *resemble* its original presentation and also *differ* from it, we cannot recognise it as a representation and consequently can have no foundation for the belief in the continuity of our own conscious life. The necessary condition of comparing resembling or differing objects is *Coexistence*; if they do not coexist with one another they cannot be compared. The *Succession* of phenomena is necessary as the condition of our own continuous existence and as the basis of the relation between presentations and representations. Thus all presentative and representative phenomena must be related

to one another in one or more of these four ways,—Difference, Resemblance, Coexistence and Succession. And the existence of these relations may be considered as one of the *a priori* conditions of our being permanent cognitive beings.

With reference to these relations, although it may be said that the objects of our knowledge must be mutually relative, it is not correct to say that knowledge itself is relative. Knowledge may be described as a relation; but to say that that relation is itself relative appears to be unmeaning. Our knowledge of any presentation is surely absolute and complete, provided that presentation is duly distinguished from other phenomena. Our knowledge of any representation, the same condition being fulfilled, appears equally absolute and complete, provided in addition that we clearly recognise the representative character of the phenomenon and clearly conceive the presentation which it represents. As far therefore as simple presentations and representations are concerned, it appears to be incorrect to say that knowledge is relative, although it is quite true that knowledge is a relation and that the phenomena of knowledge must be mutually related in order to be known.

There is another kind of relativity to which we must turn our attention. Representations are relative to some previous actual or some future possible presentation, and it has been said that our knowledge of that presentation is relative. The chief objection to this statement is that the term *relative* does not here seem appropriate or suitable to describe what is meant. Our knowledge of the representation is, as we have said already, absolute; but, in the proper sense of the term, we cannot be said to *know* the original presentation at all. We *believe* that it was actually presented in the past, or we *believe* that it may possibly or will certainly be presented in the future, but we do not *now and here know it*. If the term knowledge is to be used in describing our intellectual relation to the past ac-

tual or future possible presentations represented in consciousness, we should say that that knowledge is *mediate or representative* not relative.

Still another question of greater difficulty has to be considered in connection with this subject. The presentations of consciousness are undoubtedly related to one another and to representations in our conscious life. But it is held by many that they are related also to something else *not phenomenal*, that is, which has never been and can never be presented in consciousness. This non-phenomenal thing is sometimes called the *thing-in-itself*, and is believed to have an existence independent of our minds, and to be the objective cause of those presentations of which we are conscious. Being *inferred* for the purpose of accounting for the presentations which appear in consciousness independently of any voluntary effort of our own, it can never be directly known by us. And, since in this discussion, we ought to understand by knowledge *immediate direct* knowledge, we must exclude this non-phenomenal inferred entity from the sphere of knowledge altogether. We *believe* in its existence as an inference from the presentations of our consciousness, we may hold different views regarding its nature and relations to phenomena, but we certainly cannot say that we know it and consequently cannot say that our knowledge of it is relative.

What we appear now to have made out is:—that knowledge itself is a relation, which however requires further examination; that the objects of knowledge are related to one another in terms of difference, resemblance, co-existence and succession, but that our knowledge of them cannot be properly called relative; that those phenomena which are representations are related not only to other phenomena presently in consciousness but also to other past actual or future possible presentations which are believed in but not known and of which they are the proxies; and that presentations also are related not only to other contiguous phenomena, but also to certain inferred or hypothetical



realities believed in, it may be, but not known, and therefore not known relatively.

II. We now proceed to the examination of Sir W. Hamilton's statement of the doctrine, which is contained in his eighth lecture. According to him knowledge is relative, 1st, "Because existence is not cognizable absolutely and in itself, but only in special modes; 2nd, Because these modes can be known only if they stand in a certain relation to our faculties; and 3rd, Because the modes, thus relative to our faculties, are presented to and known by the mind only under modifications determined by these faculties themselves."

There is much in the phraseology of this statement open to unfavourable criticism. When Hamilton speaks of absolute and in-itself existence it does not appear very clear what he means. Existence is an abstract idea taken from things or phenomena which exist. And, according to the laws of representation, it is impossible to conceive existence apart from particular existing things, just as it is impossible to represent extension apart from something extended. Moreover existence apart from existing things is not only unrepresentable but also, as an actual fact, unbelievable. Existence is only an idea abstracted from particular existing objects, and which has no reality apart from these objects. If this is what Hamilton means by absolute existence it appears superfluous to tell us that it cannot be known.

But there is reason to believe that by absolute existence Hamilton does not mean the abstract idea above described, but that he means the inferred objective causes of phenomena. In summing up his review of philosophers' doctrines regarding the relativity of knowledge he says "We know mind and matter not in themselves, but in their accidents or phenomena." And here mind and matter, the unknown bases of phenomena, are evidently synonymous with absolute existence. By absolute existence then he means the objective cause or causes which co-operate with our activity in giving rise to the phenomena of our



knowledge. But these objective inferred causes are not known to us at all ; we *infer* and we are compelled to infer that some objective causes exist, but the nature of these causes is only a matter of uncertain speculation. And it is not correct to say even that these objective causes are known *in their modes*, as Hamilton appears to say in his second proposition. The *modes of existence*, Hamilton appears to consider different from the *phenomena of our knowledge*, as well as from *absolute existence*. Now, we know nothing but *phenomena* ; modes of existence which are not phenomena we do not know. Perhaps, however, by modes of existence, Hamilton means the particular objective causes, such as vibration, heat, light, and so on, which along with our activity, produce phenomena. But these causes are only inferred and speculated about, they are not known. If this be Hamilton's meaning, then his doctrine that the modes of existence may be greater than the number of our faculties of apprehension appears to amount to this,—that if we were endowed with other senses we might have other sensations. There may be objective causes in existence which would give rise to hitherto unknown phenomena if we had only faculties of apprehension adapted to them. This is a statement which cannot be denied. The third point of Hamilton's statement is,—that “ the modes thus relative to our faculties are presented to and known by the mind only under modifications determined by these faculties themselves.” In examining this we shall take for granted that by “ modes” Hamilton means the inferred objective causes of particular phenomena. And it appears quite plain that these are *not* “ presented to and known by the mind” at all ; they are inferred merely to account for the phenomena which are known. Still it may be truly said that these phenomena are the result partly of the objective “ modes” and partly of the subjective “ modifications” of which Hamilton speaks. The character of our sensitive organism undoubtedly determines the character of the phenomena of which we are conscious. If we had not

eyes and optic nerves of a particular construction we could not be conscious of colours as we now are. If we had not a system of nerves radiating outwards from the centre at the extremities of which sensations are located we could not have a knowledge of these sensations as at a particular place or extended over a part of our bodies. The organic structure of our sense-apparatus is adapted to the objective "modes" or forces so that when the latter come into contact with the former certain phenomena such as colours, sounds, smells, touches and so on arise in consciousness. But it must be borne in mind that the sensitive organism of our bodies is itself *objective* with reference to consciousness. And the relation between our organic system and the extra-organic forces of nature has for its result the presentation of phenomena such as the above in consciousness. Hence when Hamilton speaks of "modifications determined by these faculties themselves" we can scarcely interpret him as referring to the part which the sensitive organism plays in the production of phenomena. He would be the last person to predicate any modifying power of the organic senses; and he doubtless refers to something purely mental. From other parts of his writings we know that he holds that there are certain principles in the mind itself which regulate and determine the character of our knowledge. These principles are called *a priori* or *regulating* principles and, taken together, constitute what he calls the Regulative Faculty. They are not derived from sensations or phenomena; they are the subjective elements introduced by the mind into phenomena. There can be little doubt but that, by the "modifications determined by the faculties," Hamilton means the *a priori* elements of knowledge contributed by the mind. But as he does not here explain himself fully regarding this matter we shall defer the discussion of it to a subsequent Note. Meantime we may sum up in our own language Hamilton's doctrine of relativity, and, in doing so, we prefer to invert the order in which he has stated it.

All that we can directly know is phenomenal; to suppose that we can know things as they exist anterior to and independent of our knowledge is contradictory and absurd. But the phenomena which we immediately know are not purely objective; they comprehend also subjective elements contributed by our own minds. These subjective elements are inherent in our intellectual nature as cognitive beings, and they unite themselves to the objective elements furnished by the organism and the extra-organic forces, this union constituting the phenomenon of consciousness. These phenomena are what we *know* but we are constrained to *infer* from them certain objective "modes" which existed in the outside universe anterior to the rise of the phenomena; and there may be "modes" now in existence which are not adapted to our organism and which therefore do not give rise to conscious phenomena. From the various inferred modes of existence, and from other possible modes which we have not been led to infer, we can generalize existence itself, abstract or absolute existence. But since the special modes of existence, the particular kinds of objective agents or causes, cannot be directly known, but are only inferred, it follows *a fortiori* that abstract existence must also be unknown. Hence we may say generally,—*That all that we immediately know consists of phenomena, and that these phenomena are not purely objective, but consist of certain elements contributed from our cognitive nature and certain elements contributed by our sensitive organism in co-operation with the extra-organic agents of nature.*

III. The third point to which we shall turn our attention refers to the consistency or inconsistency of Hamilton's doctrine of relativity with his doctrine of the immediate knowledge of the non-ego. It is alleged by Mr. J. S. Mill that the two doctrines are inconsistent, and there can be no doubt but that Hamilton's phraseology sometimes lays him open to the charge. In his account of Natural Realism he tells us over and over again that we are immediately con-

scious of *the thing itself, the material reality, the material non-ego*. And Mr. Mill charges him with asserting in his exposition of Natural Realism, an immediate knowledge of that which, in his statement of the doctrine of relativity, he had said we cannot know. In making this charge Mr. Mill has of course to assume that the *absolute existence*, the *thing-in-itself* of the doctrine of relativity, is identical with the *thing-in-itself*, the *material reality* of the doctrine of natural realism. If we were to judge simply from the phraseology which Sir W. Hamilton employs we might admit the correctness of Mr. Mill's charge. But it is surely inconceivable that Sir W. Hamilton should be so obtuse as not to see and avoid such an obvious contradiction. And a generous critic ought to seek to reconcile apparent inconsistencies rather than to press upon them the character of absolute contradictions. Moreover we think that the apparently inconsistent statements of Sir W. Hamilton may be accounted for by considering the different objects which he had in view in the exposition of the two doctrines. In his exposition of the doctrine of relativity he was opposing himself to these transcendental philosophers who held that the Absolute, or the Thing-in-itself can be known; in his exposition of natural realism he was opposing the representationists who held that we do not immediately know the objects of the material universe, but only through a representation. Against the former he maintained that we can know only phenomena; against the latter, that the phenomena which we do know are not representatives of other and more real objects, but that they have themselves a real objective existence, that they constitute the real world of our knowledge. Thus he uses the term *thing-in-itself* in two different senses; in the one case it is opposed, as unknown, to the phenomenon which we know; in the other case, it is opposed, as a reality known to us, to the representative idea, a hypothetical fiction which does not exist; in both cases it may be maintained that Hamilton's object of knowledge is a phenomenon only, but composed



of the subjective and objective elements which we before pointed out. Hence we conclude that Hamilton's doctrine of relativity is not really inconsistent with his doctrine of our immediate knowledge of the material non-ego.

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## NOTE B.

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### SIR WILLIAM HAMILTON'S DOCTRINE OF CONSCIOUSNESS.

Sir William Hamilton's doctrine of consciousness will be almost exhaustively examined by studying what he teaches regarding (1) the character and elements of consciousness, (2) the sphere of consciousness, and (3) the interpretation of consciousness.

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#### I.—THE CHARACTER AND ELEMENTS OF CONSCIOUSNESS.

According to Sir William Hamilton, and indeed every other psychologist, consciousness is the most general phenomena of the human mind, and all particular phenomena are but its states or modifications. No mental phenomenon can take place which is not, as it were, a link in the general train of our conscious life, a particular form of consciousness. Hence it is impossible to *define* consciousness in the proper sense of the term, that is, to refer it to a higher class of phenomena of which it is a species. Every particular mental phenomenon involves consciousness ; and, on the other hand, there can be no general consciousness which is not some particular phenomenon. Consciousness may be compared to an inner light which reveals to us all that takes place in our minds, and is considered by Hamilton to be synonymous with immediate knowledge. There are three elements into which Hamilton analyzes



consciousness, viz. :—A recognising or knowing subject ; a recognised or known modification ; and a recognition or knowledge by the subject of the modification. Thus consciousness, or immediate knowledge is, in reality, a relation between two things,—the knowing subject and the known modification or phenomenon. This relation and the terms of it are worthy of very close examination.

The first term of this relation is the knowing subject, the self or ego ; the second term consists of the presentations and representations which are known. With reference to the first of these terms it is manifest that it cannot be itself a phenomenon ; we could never say that one sensation knows another, or that a thought is aware of a volition, or that any single mental phenomenon cognises any other. It would seem equally absurd to say that the whole collection of phenomena which constitutes our consciousness at any one time *knows* any particular phenomenon of the series ; or that the whole of our past and present conscious life consisting of all past and all present phenomena cognises any phenomenon now in consciousness. Every single phenomenon is *known*, is an *object* of knowledge ; and it is impossible to invest the whole aggregate of phenomena with a power the elements of which are not possessed by them separately. Still further we cannot, by generalization, from all the past and present aggregate of mental phenomena, obtain an element which can be considered identical with the first term of the relation we are examining. Suppose that, from all past and present mental phenomena, we abstract and generalize Feeling itself, we may have here the highest mental abstraction we can reach, but it is *not* the *self*. Thus we set aside three doctrines which may be held regarding the character of the first term of the relation of knowledge, the knowing subject :—(1) That the subject of consciousness is some particular phenomenon of consciousness ; (2) that it is the whole aggregate of mental phenomena past as well as present ; (3) that it is some element or charac-

teristic of the mental phenomena, abstracted from particulars, such as Thought or Feeling. All of these propositions we reject because it is inherently absurd that a single phenomenon or an aggregate of phenomena or an abstraction from phenomena should exercise the function of *knowing* which *we* are conscious of possessing. There is an element in the relation of immediate knowledge which makes it impossible to explain that relation as existing between mental phenomena simply, or between any combinations of mental phenomena or any abstractions from them.

A common man speaking of his mind or feelings would say "*my mind*," or "*my feelings*." He would say "*I* thought so-and-so," or "*I* felt such a sensation," or "*I* was conscious of this smell or that sound." In short every one thinks and speaks of himself as a *person* not to be identified with his body, or the series of phenomena which make up what he calls his mind. This reference of all one's feelings and thoughts to *self* is called self-consciousness. The idea of self-hood involves the belief that "*I*" who am conscious of feelings at the present moment am the same identical being who was conscious at a past time of those feelings which "*I*" remember. This permanence of self in the midst of successive and diverse sensations is the essential element of personality. The idea of self is not of the sum of the series of feelings which constitute our general consciousness, because it is absurd to speak of the aggregate of a series of feelings being conscious of any one of themselves. Nor is it that of Feeling in general abstracted from particular feelings, because it is absurd to attribute to this or any other abstraction the function of conscious knowledge. In the relation of knowledge there is implied a kind of opposition between self and the sensations of which self is conscious. Sensations past, present and expected are all referred to self as their possessor and subject. Self is thought to be the *unity* in the midst of *diverse*

kinds of sensations, the *permanent* element in the midst of *transient* and *successive* sensations, the *one conscious subject* in the midst of *many known objects*.

In "self" therefore we have the subjective term of the relation of knowledge, but this term of the relation is so peculiar and remarkable that we must bestow some more attention upon it. We have said that it is not a phenomenon, and it cannot, in any way, be phenomenized so as to become *known*. The function of self is *to know*, and although, in the very act of knowing, a phenomenon arises, yet it is impossible for *that which knows* to set itself over against itself as object and thus become known. Self is the universal relative of all objects,—a something separating itself, as it were, from the phenomena of general consciousness and converting them into objects, but incapable itself of becoming an object. This peculiarity of self makes it the most intractable and puzzling element of our conscious existence. Unknown, but all-knowing, it emerges, as it were, from the midst of the endless variety of phenomenal consciousness, asserting its freedom from phenomenal law, and offering the great miracle of the life with which we are endowed. It is absurd to attempt a scientific definition or exposition of the unknown; but we have the power of studying its function *conscious activity*, and through the study of this function alone can we learn anything about the nature of *that which is conscious*.

About the beginning of this Note it was said that knowledge was the relation between the knowing subject and the known modification. In the former Note we examined the a priori relations existing between the known modifications and we have now turned our attention to the first term of the relation. It remains to examine the relation itself which Hamilton describes as "*the recognition by the subject of the modification*," and which is described above as *conscious activity* directed towards objects. For the function of the subject is really the same

as the relation between the subject and the objects of knowledge. And it is manifest that this relation must be different from other relations with which we are acquainted, since the subjective term of it is different from any object of our knowledge. Moreover the terms of the relation, under present conditions, are *inseparable*, because the phenomena which we know are themselves comprehended in and to a certain extent identical with the act of knowing. When we feel a smell, the act of feeling and the smell itself appear to be, as it were, different sides of the same phenomenon. When we attempt, therefore, an examination of conscious activity as seen in cognition we cannot very well separate that activity from its objects. We describe the function of self in cognition as conscious activity in order to distinguish it from the *objective* or *passive* element in phenomena. Knowledge is not the reception of images or impressions from without; it is essentially an *activity* of self in relation to things which are not self. This activity is perhaps best described or rather indicated by such terms as *assertion*, *judgment*, or *predication*. We are conscious of a loud noise; in the act of consciousness there is involved the *assertion* of the existence of the sound. We are conscious of two varying sensations; we *assert* that they differ from one another. We are conscious of a particular smell, colour, figure, and taste; we *assert*—this is a rose. Now without this mental assertion there is no knowledge; the mere appearance in consciousness of some phenomenon which does not call forth a responsive activity is not knowledge. We have therefore in this assertion—this conscious activity indicated by the term assertion—the essential element of that relation existing between subject and object in cognition.

There is a particular feature of this relation of great importance which we may indicate by the term *objectification*. It is essential to knowledge that the object should be put over against the subject,—that the phenomenal activity should be discriminated into subjective and ob-



jective elements. This creation of an opposition or antithesis between subject and object, called objectification, is perhaps a result of the conscious activity before described as assertion, or is perhaps identical with it; but it is at least essential to every act of cognition.

Conscious activity is, as we saw before, further discriminated into the assertion, in general, of the four great relations between objects,—difference, resemblance co-existence and succession, and the various combinations of these which make up our phenomenal knowledge. But this we do not now need to discuss. We shall proceed to the consideration of our second point—the sphere of consciousness.

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## II.—THE SPHERE OF CONSCIOUSNESS.

The doctrine which Hamilton maintains regarding the sphere of consciousness is that consciousness is co-extensive with all our knowledge—with all our faculties of knowing as well as with the objects of those faculties. And he supports this proposition in detail by showing that in imagination, in memory, and in perception, the objects of these mental acts are objects of consciousness also. But it is manifest that consciousness is cognisant only of what is *now* and *here* present to the mind; and hence if consciousness is to comprehend the objects of imagination, memory, and perception, these objects must be shown to be now and here present. This is what Hamilton does. He does not extend the sphere of consciousness to the past or the distant; but he contracts the spheres of imagination, memory and perception to that which is present in time and space. The object of imagination, for instance, is not the distant or the past or the future thing or event which is thought about; it is the present mental representation of that thing or event, and that is plainly the object of consciousness. So the object of memory is not the past event which occurred, but the present representation of it.



And, in perception, the thing which we see or hear is not the distant object from which the light or sound proceeds, but the organic impression of which we are conscious. Thus Hamilton makes consciousness co-extensive with all knowledge, by restricting the particular forms of knowledge so as to bring their objects into immediate relations with the conscious-subject.

Notwithstanding the importance which Hamilton attributes to this doctrine and his laborious efforts to support it, we cannot admit its accuracy. Memory, imagination, and perception have certain universally recognised and appropriate meanings, which the psychologist has no right to alter. When the psychologist adopts a term in common use into his system he ought to employ it in its common and understood meaning. And certainly the common and universally understood meaning of memory, imagination and perception is not that which Hamilton gives to them. When we speak of remembering an event, as, for example, the visit of the Prince of Wales to Calcutta, the object of memory is *not* a present idea or representation but the past occurrence. It is unavailing to say that the past event does not now exist and therefore cannot be an object of memory. The act of memory in reality reproduces the past event, by projecting backwards into past time our present mental representation of it, and asserting a belief that it actually occurred as we represent it. In this act the object of consciousness is only the mental representation; the object of memory is the mental representation projected backwards in time and invested with that reality of objective existence which we assert when we say that we believe it actually occurred. Thus the object of consciousness is only partially identical with the object of memory; the latter involves elements which are not contained in the former.

Similar remarks might be made with reference to imagination.

In perception it may be made equally manifest that Hamilton's identification of the sphere of consciousness and

perception cannot be held. According to the universal use of the term perception, we are said to perceive distant objects; and when we adopt this term into psychology we have no right to change its meaning. We may quite properly analyze the act or the process of perception into its elements, but in doing so we must take care and not destroy it. According to Hamilton, perception, as far as sight is concerned, is the consciousness of the impression of light upon the retina of the eye. And it is perfectly certain that this is not the ordinary and proper meaning of sight. The ordinary man sees distant objects. His seeing of distant objects is a phenomenon which he cannot explain; the psychologist undertakes to explain the phenomenon; but in doing so he has no right to mutilate or destroy it. This Hamilton does by bringing the object of perception into immediate contact with the organism. The object of consciousness is, no doubt, partially identical with the object of perception; but, as in memory, the latter involves elements which are not contained in the former. The analysis of the process and the object of perception would be out of place here; and, having stated our objections to Hamilton's doctrine regarding the sphere of consciousness, we shall now proceed to our third point, the interpretation of consciousness.

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### III.—THE INTERPRETATION OF CONSCIOUSNESS.

According to Sir William Hamilton there are two methods of interpreting consciousness, which he calls the inductive and the critical methods respectively. By the former method particular phenomena of consciousness are subjected to study and classified according to their resemblances or differences, and from them general laws of thought are reached by induction. Many cases of *causal connection*, for example, are observed, and from them there is generalized the great principle that every event has a cause. Simi-

larly, many material objects are perceived to be extended, and it is concluded by induction that all material things are extended, or are perceived as occupying space. But Sir William Hamilton objects to this method that it is incapable of explaining the element of *necessity* which is involved in many mental products or laws. Induction alone can only lead to a principle which is *generally* and *probably* true; but there are principles in the human mind which are *universally* and *necessarily* true. For example all men not only believe, but *must* believe that every event has a cause; all men not only perceive but *must* perceive phenomena under the relations of time and space. Now this element of necessity, it is alleged, does not and cannot arise from an induction from experience. And hence Hamilton rejects the inductive method as inadequate, and makes use of another method which he calls the *Critical*. In studying the phenomena of consciousness, he employs *criticism*, that is, he discriminates the phenomena of consciousness into two classes:—those which are contingent, the results of mere experience; and those which are necessary, and therefore not the *results* of experience but rather the *a priori conditions* of experience. By this critical examination of the simple facts of consciousness he is able to account for the elements of necessity and universality in the more complex products of conscious life; and he is able also to make use of the method of induction wherever it may be applicable.

Mr. J. S. Mill, in his examination of Sir William Hamilton's method, chooses to call it the Introspective Method, instead of adopting the name which Hamilton himself applies to it. Whatever may have been his motive for changing the name, we do not think that the one which he has chosen is so suitable as the proper one. All methods of interpreting consciousness must employ introspection, since introspection is the only possible means by which we can become acquainted with the contents of our minds. In fact introspection appears to be almost synony-

mous with consciousness itself. The term introspective therefore does not distinguish Hamilton's method from others, and we prefer to employ the term which Hamilton himself used, and call his method the Critical.

The term *Inductive* by which Hamilton designates the method which he rejects, is rejected by Mr. Mill also, although the method itself is essentially that which he employs. He calls it by a new name, the *Psychological Method*, and although this name is not without objections, yet we shall employ it, since it is that by which Mill designates his own method. We have then, to be examined, two important methods of studying the phenomena of consciousness, viz. the Critical and the Psychological. We have seen that the first of these discriminates between two classes of conscious phenomena, the contingent and the necessary. These facts which are necessary and simple and universal are held to be the primary and original elements of our conscious existence and to be the *a priori* conditions of all experience. All contingent phenomena of experience are based upon them and have them as essential constituent elements.

The objection urged by Mr. Mill against this method is that necessity and universality do not of themselves render it certain that a mental fact is original; complex and derived facts or phenomena may also be characterized by necessity. Hence, according to him, before we accept any fact or phenomenon as an original and simple datum of consciousness we must examine into the character and source of its necessity. There is a necessity which results from experience, and which consists simply of an inseparable association; and in fact all necessity may result from the application of the laws of association to phenomena. Mr. Mill holds in particular that extension and space are the results of experience and association. And the proposed object of all those who make use of the psychological method is to show that all mental products are the results of experience and association.



Now there can be no doubt but the laws of association play a most important part in the formation of the complex contents of our consciousness. Phenomena do not appear in consciousness in an accidental or random order, but there is a mutual connection between them of such a nature that they serve to bring one another before consciousness. When two mental phenomena have been experienced at or about the same time, a bond of connection is formed between them, so that afterwards if one of them is repeated the other is likely to be represented. This link of association between mental phenomena appears to be altogether independent of volition; the associated idea of any particular phenomenon appears in consciousness without any effort of ours, or even in spite of efforts to avoid thinking about it. Illustrations of this association of mental phenomena will readily occur to any one. We have once visited a house, and at the time of our visit something of particular interest to us has occurred. If we ever again visit the house or even have our thoughts directed to it, the idea of the interesting fact obtrudes itself upon our attention. The various laws by which phenomena are associated together have been sufficiently investigated and are well-known. We need not therefore refer to them, but shall proceed to point out a distinction of importance with reference to our present study.

We have to distinguish between what is properly a *mental association* and an *objective connection*. When two or more phenomena have been once or frequently presented together in consciousness, they become connected in representation. But there are two different cases to be considered. Two different phenomena may be, upon one or more occasions, connected together in presentation, but may afterwards become objects of consciousness separately. This we may call the case of *the association of separable phenomena*. On the other hand two or more phenomena may be so connected together, that the one is never presented except in connection with the other, and the as-



sociation in this case is an *association of inseparable phenomena*. And we must be careful to discriminate between the distinction which we have here drawn between separable and inseparable phenomena and another distinction which is considered of great importance by psychologists,—the distinction, viz. between separable and inseparable associations. There may be an inseparable association of separable phenomena; but as a matter of course, when the phenomena are inseparable in presentation, the association of the representations is inseparable also. There are many familiar instances of an inseparable association of separable phenomena; a book, a watch, a trinket of any kind, which has been presented to us by a dear friend becomes, in our mind, inseparably associated with the idea of that friend. But quite different from this is the inseparable association of phenomena which are inseparable. Let us study a case.

In our experience we have never been conscious of colour except in connection with extension. No matter how far back in our lives we attempt to reach by the aid of memory we are incapable of discovering the slightest trace of the possibility of a separation between the two phenomena. We do not remember ever to have seen a colour which was not extended or an extended figure which was not, in some way coloured. Nor is there any indication in history or in language of the existence of any race of human beings in whose minds there was ever conceived the possibility of such a separation. And since the presentation of colour is always combined in our experience with that of extension it follows as a matter of course that the representations also are always combined.

This distinction between an inseparable subjective association and an association of objectively inseparable phenomena is one of great importance. When phenomena which are only occasionally presented together have an affinity for one another so as to cling together in representation, the association is truly and only mental. The

possibility of their being separated in presentation shows that their synthesis in association is only a mental one, or at least that the objective union is only accidental. But, on the other hand, when phenomena are always united in presentation and can never by any means be separated, their synthesis is not only or even chiefly mental. The objective inseparable connection is that upon which the subjective association depends. It constitutes a different kind of connection from that which is simply subjective. There is such a decided difference both in degree and in kind between the mental synthesis which we form between two phenomena which have accidentally been brought into contiguity, and that synthesis which exists between two such inseparable phenomena as extension and colour, that no person who has not a particular theory to support, would ever place them in the same category. The inseparability of phenomena in presentation leads no doubt to their inseparability in representation; but it also leads to something else, and that is, to the conclusion that the synthesis which binds them together is not a subjective one at all.

Another phase of the same distinction is found in the distinction between associations which are peculiar to individuals and those which are common to all mankind. All mental associations depend upon the experience of the individual in whose mind they have been formed. Peculiar experiences will therefore produce peculiar associations. Experiences common to all will result in associations common to all. In different zones of the earth's surface and in different countries there are many differences of climate, landscape, means of living, habits and customs which give rise to very varied mental associations. The character of the seasons in India, in Britain, and in Canada presents striking differences, and, in the minds of the inhabitants of these countries respectively, there are consequently very different ideas connected with each of them. The word "water," for example, in the torrid zone, is always asso-

ciated with fluidity as one of the characteristic qualities constituting the denoted object. But in the temperate and frigid zones, where water frequently assumes a solid form, fluidity is not uniformly associated with the word. Many other examples of variable associations might be given. On the other hand, with the word "air" there are always associated the peculiar sensations or ideas connected with respiration. "The air which we breathe" is a phrase which may be universally employed to express the experience of mankind, the reason of course being that, in our present state of existence and with our present physical constitution, the breathing of air is an essential condition of life. This association of the word "air" with the idea of breathing is just as inseparable as any association which we could name. It is moreover an association formed in the minds of all men without exception; but there are important differences which we shall note between this and other inseparable associations.

We have just considered two associations, one of them variable and the other invariable and universal, but both being associations connected with particular objects of our knowledge. The qualities or ideas associated are relative to or representative of particular complex sensations depending upon our present physical constitution. But if we consider the connection between extension and colour we shall be able to note an important difference. The qualities to which we referred as associated with air and water were simply a combination of complex sensations objectified; but here we have a sensation "colour" associated with something which is not a sensation. Extension is neither a sensation nor any combination of sensations, but a certain relation which is seen to exist between objectified sensations, or a form which is perceived in connection with a single sensation. And although the mental association between *air* and *breathing* may be just as inseparable and universal to the human mind as that between *colour* and *extension*, yet we would never place the objective con-

nection between the first pair in the same category as that between the second pair. The connection between air and breathing is determined to our minds *by the peculiar circumstances in which we are placed as physical beings*, and we can easily imagine other circumstances in which this connection would not exist. But the relation between extension and colour, although neither more objective nor more necessary than the former is determined *by the constitution of our minds with reference to external objects, or the constitution of external objects with reference to our minds*. Hence, since we are unacquainted with any other forms or laws of knowledge except our own, it is impossible for us to conceive that any intelligence could be cognisant of colour without extension; or to state the same thing more abstractly, it is impossible for us to conceive that any intelligence could be cognisant of phenomena except in the relation of difference and co-existence. Thus the connection between extension and colour is characterized by an absolute universality with reference to all intelligence as far as intelligence can be understood by us; while that between air and breathing has only a contingent universality with reference to beings who may possess bodies constituted as ours are.

We have endeavoured to show that the connection between extension and colour is not a case of mental association and cannot be resolved into association. Objectively the two things are absolutely inseparable; and subjectively the relation of extension depends upon the primary relation of co-existence which we have seen is an *a priori* condition of our constitution as capable of knowing. But if this doctrine be correct we have here an original fact of our consciousness which the psychological method of Mr. Mill fails to interpret. And until this method explains satisfactorily the inseparability of colour and extension both objectively and subjectively we cannot admit that it is adequate to the interpretation of all the facts of our consciousness. This case of inseparability is only one of those



which might be adduced as being insoluble by the psychological method. We have chosen to examine it thus fully because it is perhaps the most important. And as, until the above doctrines are overthrown, the psychological method must be considered unsatisfactory, we shall now proceed to the consideration of other methods.

The critical method of Sir W. Hamilton, which however is to be assigned to Kant as its author, has already been referred to, but before examining it further we desire to point out and describe another method, which has arisen out of the psychological, and which may be considered a kind of compromise between the psychological and the critical. We allude to that which has been called the *Psychogenetical Method*.

Those who adopt this method admit that there are mental facts and products which cannot be explained by the principles of association. Neither the form nor the matter of our knowledge is the result of our individual experience merely. We are born with a certain constitution, mental and physical, and the nature and extent of our subsequent acquirements in knowledge and practical ability depend upon our inherited constitution. In other words it is admitted that individuals possess certain *a priori* principles and tendencies by which the phenomena of their consciousness are determined and governed. This admission, made by such psychologists as Herbert Spencer and G. H. Lewes, is a tacit acknowledgment of the essential truthfulness of the position held by those who have adopted the critical method. But, while admitting this, the Psychogenetical method attempts to trace the origin of the *a priori* conditions and principles of our nature to a very remote source. The accumulated experience of the past ages of human history, as well as of the past ages, countless in length and impenetrable to human knowledge, of brute history, is called upon for an explanation of the origin of that physical, intellectual, and social nature with which we are born into the world. It is assumed that lower



living forms develop themselves into higher, that the experience of individuals and races gradually produces organic changes which are transmitted to successors, and that thus, by the natural transmission of organic structures produced or modified by incessant experience all the higher forms of life and mind have been produced. An adequate examination of this ambitious method would carry us far beyond our allotted space and our object; but we offer the following observations with reference to it.

1. The problem attempted by this method is practically an impossible one. We are not able to trace the series of changes asserted to have taken place. It cannot be established that experience gives rise to the structural changes in the organism said to be the result of it. The phenomena requiring to be studied in a satisfactory employment of the method are too remote from possible observation to be used as the foundation of a *science*. Even if we attempt to study the organic changes produced by experience in human beings now living we cannot succeed; and any dogmatic assertions made regarding them must be rash and vain. Much more must this be the case with reference to races of men and animals which existed in a remote past antiquity. Consequently the researches carried on in accordance with this method are nothing better than ambitious and perfectly uncertain speculations.

2. Against the fundamental assumptions of this method it may be alleged that mental phenomena do not, in some cases at least, correspond to organic structure. It is now universally admitted that the brain and nervous system of the anthropoid ape is exceedingly similar to that of man, whereas the mental functions of the latter are almost infinitely in advance of those of the former. This fact is quite inconsistent with the fundamental assumption of the psychogenetical method.

3. If experience in past ages has given rise to necessary truths and a priori conditions of thought and knowledge, we might reasonably expect that these a priori principles should

continue to be produced in our own age. While it may be admitted that some particular tendencies and abilities may be acquired and transmitted, it has not been shown that the essential and universal laws of human intelligence have suffered the slightest change since man came into being.

From these considerations we should be inclined to reject the psychogenetical method as impracticable, possibly false, and quite incompatible with that desire to attain *certain* conclusions which ought to characterize men of *science*. And we are now driven back to the critical method of Kant and Hamilton which we adopt as correct and adequate, with the following reservations :

1. The adoption of this method does not commit us to all the results of criticism which those who have hitherto employed the method have reached. It may be that mistakes have been made in discriminating between facts of consciousness as original and acquired, simple and complex, that some phenomena have been regarded as original and simple which are really derived and complex. But this admission does not detract from the value of the method.

2. The adoption of the critical method does not prevent us from making use of the principles of association as far as they are applicable. It is not an essential principle of this method that anything which is now found to be necessary must be an original necessity of intelligence. And if any necessity of thought or knowledge can be explained by the laws of association or any other principles of experience it ought unquestionably so to be explained. But the critical method insists upon distinguishing between such explicable necessities of thought, and an inexplicable residue of necessities which, from their nature, must be taken as *a priori* and founded in the constitution of our intelligence.

3. The critical method, while it looks principally to the phenomena of consciousness as the materials with

which it has to deal, is not inconsistent with a careful study of the organism and cosmic forces and laws in so far as these way throw light upon the problems to be solved.

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## NOTE C.

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### SIR WILLIAM HAMILTON'S CLASSIFICATION OF MENTAL FACULTIES.

Sir William Hamilton divides the operations of the mind into six classes which he calls Faculties. These are—the Presentative, the Retentive, the Reproductive, the Representative, the Elaborative, and the Regulative. We might criticise unfavourably the use of the term *faculty* to express a class of mental operations, were it not that Hamilton himself guards against an improper use of it. Faculty, with him is not a part or organ of the mind, but simply a class of similar mental activities. But the particular classification of operations which he adopts is open to serious objections. We must bear in mind that one of Hamilton's most important doctrines is that all particular mental operations are but particular modes of consciousness, and that consciousness comprehends or is co-extensive with all its own particular modes or activities. Now the second and third of Hamilton's Faculties are admittedly exercised out of consciousness. 'The so-called Retentive Faculty or memory is the retention, somewhere or in some way not very well understood but certainly out of or beneath consciousness, of knowledge once presented so that it may afterwards be represented. This retention may be explained as resulting from a certain constitution of the mind, as Hamilton explains it; or it may be explained as resulting from a certain constitution of the nervous system as certain physiologists explain it. But however it may be explained, it certainly is not mental activity; it is

not exercised in consciousness ; it is not a mode of conscious life ; and therefore it should not be called a mental faculty, if by faculty we mean a conscious mental operation, as Hamilton does. As for the Reproductive Faculty, it also is exercised beneath consciousness. The act of reproduction has been finished as soon as the phenomenon appears in consciousness, and therefore it cannot be called a conscious mental activity. Still further the so-called Reproductive Faculty is simply a name given to the laws of association which express the order in which phenomena usually appear in consciousness. The laws which determine the order in which one mental phenomenon follows another are certainly of importance but they are not properly called a faculty, they are not a conscious mental activity.

The sixth of Hamilton's Faculties—the Regulative—he himself admits to be improperly called a Faculty. It is simply a name given to the sum of a priori principles which govern our mental operations. We are so constituted that we must know and think in certain ways and according to certain principles. And it is of great importance for us to be able to analyze this original constitution of our nature so as to ascertain the general laws which must govern our conscious mental life. But these laws are certainly not classes of mental activities or phenomena, are not properly in consciousness, and should not therefore be collected into a class called by the name of Faculty. The result of our criticism is that we reject three of Hamilton's list of Faculties.

The remaining three,—the Presentative, Representative, and Elaborative must be retained. Knowledge is presented, represented, and elaborated, all these acts taking place in consciousness.

The preceding criticism of Hamilton's classification is founded upon the principle which Hamilton maintains, that consciousness is co-extensive with all mental activities, the latter being but particular modes of consciousness. It



is however open to the psychologist to maintain that there is a kind of mental activity going on beneath the sphere of consciousness; but if we admit this we must give up the doctrine of the co-extensiveness of consciousness and mental activity. There are certain obscure problems connected with what goes on beneath the sphere of consciousness which should not be hastily solved. Knowledge is somehow retained so that it may be subsequently represented in consciousness, but whether the conditions of its retention are mental or cerebral it is not very easy to determine. Thought are sometimes suggested to the mind in such very extraordinary ways that we find it difficult to explain their origin. Sometimes a strange sympathy is excited between one mind and another so that the one can control the other without any apparent physical communication. There are many obscure phenomena which appear to indicate that there is a sphere of *spiritual* activity and life unilluminated by the light of consciousness and beyond the region of direct study. While therefore, if we admit Hamilton's own great principle of consciousness, we must reject his classification of mental faculties, it is perhaps better to leave the character of sub-conscious life and activity undetermined until more of the obscurities connected with it are cleared up.

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## NOTE D.

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### REID'S DOCTRINE OF PERCEPTION.

It is an unfortunate thing that Sir W. Hamilton, in his Lectures, has made it a matter of so great importance to show that Reid held the doctrine of Natural Realism. The truth or falsehood of Natural Realism does not, in the slightest degree, depend upon the doctrine of perception held by Reid; and although the character of Reid's philo-



sophy may have been of importance to those who listened to his lectures it does not seem now to be of the slightest consequence whether he was a Natural Realist or not. It seems therefore extraordinary that Hamilton should have devoted three lectures to the examination of Reid's historical review of theories of perception and of his own theory. And it is quite bewildering to follow Hamilton in his examination of the errors of the philosophers whom Reid criticises, Reid's errors in criticising them and Brown's errors in criticising Reid's criticism. Without attempting to follow Hamilton through this bewildering maze, we shall turn our attention to the principal point which he endeavours to maintain,—that Reid was a Natural Realist. In his twenty-third lecture, Hamilton sums up his examination of Reid's doctrine by pointing out four suppositions upon which Reid must be held to be a Natural Realist. These are :—(1) If he maintain that his immediate perception of external things is convertible with their reality; (2) if he assert that, in his doctrine of perception, the external reality stands to the percipient mind face to face, in the same immediacy of relation which the idea holds in the representative theory of the philosophers; (3) if he declare the identity of his own opinion with the vulgar belief, as thus expounded by himself and the philosophers; or (4) if he declare that his perception affords us equal evidence of the existence of external phenomena, as his consciousness affords us of the existence of internal. And Hamilton adduces quotations, which we shall examine, to show that all these suppositions are fulfilled in Reid's doctrine. In support of the first and second he adduces the following :—“ We have before examined the reasons given by philosophers to prove that ideas, and not external objects, are the immediate objects of perception. We shall only here observe, that if external objects be perceived immediately we have the same reason to believe their existence as philosophers have to believe the existence of ideas, while they hold them

to be the immediate objects of perception." (Works, p. 446).

From this quotation, according to Hamilton, we are to conclude that Reid holds that to be perceived means the same as to exist, and that, in perception, the external reality stands face to face to the percipient mind in the same immediacy of relation as the ideas of the philosophers stand to consciousness.

A fair reading of the quotation should lead us, we think, to this conclusion:—that the immediate perception of external objects is as sure a guarantee of their existence as the consciousness of ideas is of their existence. It is one thing to say that perception is a *guarantee* of existence or reality; it is another thing to say that perception is *convertible* with existence or reality. The latter was said by Berkeley, but Reid did not understand the doctrine and never expressed it. All that Reid meant to say was that we should place as implicit confidence in our perception of external objects as philosophers do in their consciousness of ideas. And none but madmen or fools have ever doubted this. But in saying this he asserts nothing whatever regarding the *character* of perception. He tells us, however, that external objects are the IMMEDIATE objects of perception, and here we appear to have something said regarding the nature of perception. But the question arises,—what does Reid mean by *immediate*? There are two meanings of this term which it is of importance for us to discriminate. The first of these may be called the *psychological* meaning, and in this sense the term is used by Hamilton. In this sense immediate knowledge means *knowledge in which the object is present to consciousness itself and not through the medium of any representation*. The second of these may be called the *logical* meaning, and in this sense immediate knowledge means *knowledge which is obtained directly without the intervention of a process of proof or inference*. Now when Reid says that the objects of the external world are

the *immediate* objects of perception, we cannot decide whether he is a Natural Realist, until we have determined whether he uses the term in its *psychological* or in its *logical* significance. He might use the term in its latter sense without having the most remote idea of the meaning of that immediate knowledge which is asserted in Natural Realism. A few quotations from his writings will show in what sense he uses it.

“In the meantime, I beg leave to think with the vulgar, that when I remember the smell of the tuberose, that very sensation which I had yesterday and which has now no more any existence, is the immediate object of my memory.” (Works, p. 106.) It is simply impossible that *immediate* can be used here in the *psychological* sense, since the so-called immediate object now no longer exists. And immediately below this passage he explains himself in such a way that we must conclude that he had the *logical* meaning of the word in his mind. “If you ask me,” he says, “why I believe that the smell exists, I can give no other reason, nor shall ever be able to give any other than that I smell it. If you ask me why I believe that it existed yesterday, I can give no other reason but that I remember it.” Manifestly *immediate*, of the first quotation, is identical in meaning with *I can give no other reason*, of the second. That is, it is used in its logical sense. Again, in his essays upon the Intellectual Powers, Reid says—“If, therefore, we attend to that act of our mind which we call the perception of an external object of sense, we shall find in it these three things:—*First*, some conception or notion of the object perceived; *Secondly*, a strong and irresistible conviction and belief of its present existence; and, *Thirdly*, that this conviction and belief are *immediate* and *not the effect of reasoning*.” (Works, p. 258). Here Reid himself indicates as clearly as possible that the term *immediate* is used in its *logical* sense. And in explaining the third of the above points he enlarges upon the fact that no process of reasoning is in-

volved in perception. But throughout his writings we have nowhere been able to discover the idea of *psychological immediacy* which is involved in the doctrine of Natural Realism.

Hamilton's third point is that Reid declares the identity of his own opinion with the vulgar belief. What can be established by this it is difficult to see. Berkeley declared the identity of his opinion with the vulgar belief; and yet Reid is very far way from the position of Berkeley. Reid declared the identity of his opinion with the vulgar belief, and yet he maintained, contrary to vulgar belief, that *the appearance or idea of colour* is in the eye (Works, p. 137) and that the *colour* of an external object is *something unseen and unknown* (Works, p. 138). Hamilton declared the identity of his opinion with the vulgar belief, and yet he held that the immediate object of perception is in all cases in immediate contact with the organism, a proposition which the vulgar can neither understand nor believe. An appeal to uncritical unenlightened vulgar belief is surely unworthy of a philosopher.

In the fourth place, Hamilton tells us that if Reid "declare that his Perception affords us equal evidence of the existence of external phenomena, as his consciousness affords us of the existence of internal" he must be a natural realist. But surely it is possible to hold that we can place implicit confidence in the truth of perception without holding that the object of perception is immediately present to the mind. The essential point of natural realism is *that the non-ego is immediately present to and known by the ego*; but this point is not involved in the assertion that perception gives us *certain evidence* of the existence of its object. The longest train of mathematical reasoning gives us *certain evidence* of the truth of its conclusion, but this fact vouches nothing as to the *character* of the reasoning process. Neither does the certainty of perception vouch anything as to the character of perception. The fact is that Reid knew no more about



the doctrine of natural realism than Berkeley knew about Kant's doctrine of the subjectivity of space. Although Berkeley came very close to the doctrine of natural realism, Reid did not even understand him, and it appears to be a foolish anachronism to attribute to Reid a doctrine which had then scarcely dawned upon the minds of psychologists.

Reid's doctrine of perception was a slight advance upon that of preceding representationists. He held *that sensations, by a natural and irresistible principle of our constitution, suggest to our minds the conception and create the belief of external objects, and that this suggestion is immediate and not the effect of reasoning.* How this can possibly be interpreted as a form of natural realism, and *why* the attempt should be made thus to interpret it, transcend the present writer's power of imagination to conceive.

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## NOTE E.

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### NATURAL REALISM.

This is the name which Sir W. Hamilton gives to the doctrine which may be considered the most important that has been enunciated by him. We shall first quote, from his sixteenth lecture, Hamilton's statement of the doctrine. "We may therefore lay it down as an undisputed truth, that consciousness gives, as an ultimate fact, a primitive duality ;—a knowledge of the ego in relation and contrast to the non-ego ; and a knowledge of the non-ego in relation and contrast to the ego. The ego and non-ego are, thus, given in an original synthesis, as conjoined in the unity of knowledge, and, in an original antithesis, as opposed in the contrariety of existence. In other words, we are conscious of them in an indivisible act of knowledge together and at once,—but we are conscious of them as, in themselves, different and exclusive of each other. Again,



consciousness not only gives us a duality, but it gives its elements in equal counterpoise and independence. The ego and non-ego,—mind and matter—are not only given together, but in absolute co-equality. The one does not precede, the other does not follow; and, in their mutual relations, each is equally dependent, equally independent. Such is the fact as given in and by consciousness.” The grand psychological doctrine here enunciated is probably the most valuable contribution which Sir W. Hamilton has given to the philosophy of his country and the world. And this doctrine has already been incorporated into the systems of eminent psychologists who are not always ready to acknowledge whence it comes. Before proceeding to the examination of Natural Realism we propose first to criticise what appears to be an inaccuracy in the above expression of it.

Hamilton says that consciousness gives “a knowledge of the ego in relation and contrast to the non-ego; and a knowledge of the non-ego in relation and contrast to the ego.” In Note B above, when examining “the character and elements of consciousness” we pointed out that the ego “is not a phenomenon, and cannot in any way be phenomenized so as to become *known*. The function of self is *to know*, and although in the very act of knowing, a phenomenon arises, yet it is impossible for *that which knows* to set itself over against itself as object and thus become known.” From this point of view the reader will at once see that the expression “a knowledge of the ego” cannot be considered correct. The ego is the subject of consciousness,—that which is conscious—but cannot be known. The objects of consciousness are known. There is a relation between the ego and the non-ego; from the *subjective* side the relation is one of *knowing*; from the *objective* side, it is one of *being known*. Hence it would be more correct to say that an examination of consciousness gives as an ultimate fact a relation between the ego as the permanent and universally-present conscious-subject,

on the one hand, and a multiplicity of different and transient objects constituting the non-ego on the other. The subjective term of this relation is itself unknown, but our knowledge of its character and reality is the result of the analysis of consciousness which leads necessarily to a belief in the existence of something which is conscious. The objective term—the non-ego—is known, not as an activity or modification of the ego, but as a real object appearing in consciousness independent of subjective determination and having an existence and laws quite uncontrolled by the conscious-subject.

Thus we appear to have, as the most essential principle of natural realism, the fact *that the ego is immediately conscious of the non-ego, or that consciousness is the relation between the ego and the non-ego, or the illuminating light which makes known the non-ego to the ego.* A fact of such great psychological importance as this is perhaps not to be fully expressed by any single mode of statement, but we hope that the above explanation will make clear its meaning.

The doctrine which is directly opposite to this principle of natural realism is that in consciousness there is no knowledge of the non-ego, but only of the states or activities of the ego. This doctrine is usually known as idealism, and of it there are many forms. The one grand objection to considering the objects of consciousness mere states or activities of the ego is that they are manifestly not so:—they appear in consciousness independent of and frequently in spite of voluntary subjective effort; the order in which they appear is, as a rule, entirely independent of subjective control; they are collected into groups constituting complex objects quite independent of any subjective synthesis. Hence to speak of these objects as states or activities of the ego is entirely to ignore their manifest character. Perhaps the prevalent errors regarding them have arisen from their being called *ideas of the mind*; if so, the sooner the terms *ideas* and *mind*, in such a loose in-

accurate application, are banished from psychology, the better.

We return then to Hamilton's fundamental and, we think, unassailable, position, that in consciousness the ego stands in the relation of immediate knowledge to a great variety of objects constituting the non-ego. And we must now enquire regarding the character and conditions of this non-ego. In answering the third objection to natural realism in lecture twenty-fifth, Hamilton explains what is the total and real object of perception or rather, as it should be, of consciousness. Perceiving the material reality, he tells us, "does not mean that we perceive the material reality absolutely and in itself, that is, out of relation to our organs and faculties; on the contrary the total and real object of perception is the external object under relation to our sense and faculty of cognition.

We perceive, through no sense, aught external but what is in immediate relation and in immediate contact with its organ; and that is true which Democritus of old asserted, that all our senses are only modifications of touch. Through the eye we perceive nothing but the rays of light in relation to, and in contact with, the retina."

The determination of the particular character and conditions of the non-ego of consciousness is not of so great consequence as the establishment of the fundamental position of natural realism that a non-ego of some kind is the object of consciousness. But, this fundamental position having been established, the point next in importance is to determine something more definite regarding the immediate and primary objects of consciousness. In the above quotation Hamilton tells us that the objects of perception are certain external realities in immediate contact with our bodily organs at the different points of sense. We have already criticised the use by Hamilton of the term perception as synonymous with consciousness or immediate knowledge; and in examining this doctrine regarding the immediately-known non-ego we shall adopt a phraseology

which we think correct. The question then is,—does the primary non-ego of consciousness consist of external realities in immediate contact with our organs of sense?

This question must be answered in the negative if it can be shown (1) that a knowledge of our bodily organs including the organs of sense is itself not primary but acquired, and (2) that it takes a certain determinate time for an impression made upon an organ of sense to be followed by an act of conscious knowledge.

1. If we are not primarily acquainted with our bodily organism, it cannot be said that we are conscious of the external reality in contact with our bodily organism. No matter what theory we hold as to the relation between consciousness and the organism, a knowledge of an external reality as in contact with the organism implies a knowledge of the organism as in contact with the external reality. And if we have not a primary knowledge of the organism, neither can we have a primary knowledge of the extra-organic reality. And we think that any one who watches the progress of the acquisition of knowledge in the case of a child must conclude that the child is not born with any definite knowledge of its own physical system. A considerable experience has to be passed through before the infant intelligence obtains any tolerable acquaintance with its own organic abode, and the same experience is necessary to enable it to become acquainted with external realities as in relation to its organism. Hence we should say that the knowledge of these external realities is not primarily given in consciousness.

2. But further the most distinguished modern physiologists tell us that a certain appreciable time elapses between contact of an "external reality" with the organ and the conscious sensation or perception. The existence of this interval appears to indicate that a nervous process must take place between the organic contact and the act of consciousness. And this is fatal to the supposition that



we are primarily and immediately conscious of the external reality at the point of sense.

What then are the primary contents of consciousness? We have seen that consciousness is the illuminating light in which the ego becomes aware of the non-ego, and in a previous Note we indicated the relations which must primarily exist between the constituent elements of the non-ego. These relations are Difference, Resemblance, Co-existence and Succession. The crude phenomenæ which appear in consciousness in these relations may be designated by the general term *Feelings*. In the course of experience, by an objective law, a law of the organism, these Feelings *locate* themselves in different parts of the organism. This location of the Feelings, we know, depends upon the nervous and muscular structure of the organism. And it is a most important step in the acquisition of the child's knowledge of his abode. Thus the immediate primary non-ego of consciousness consists of crude Feelings known in certain relations to one another; and the first step in the acquisition of knowledge consists in the location of these Feelings—the assigning to them of the position determined for them by their objective conditions.

This location of the Feelings is the foundation of our knowledge both of the organism and of extra-organic realities. The knowledge of external things may indeed be supposed to advance *pari passu* with the knowledge of the organism itself. Both are objective with reference to the ego; and it is their mutual contact and interaction, in an infinity of ways, which give rise to the phenomena of consciousness. The progress of the knowledge of the organism and of extra-organic realities is the acquisition of the power of *Perception*. The knowledge given in perception is very complex and is made up of many simple elements which it has taken a considerable time to bring together. We shall describe briefly the process by which our acquired power of perception is built up.

The most primitive act of thought consists in the intui-



tion of one of the relations of difference, resemblance, simultaneity or succession which we have described. And next in rank is the synthetic act by which objects or elements thus related are connected together into unity. These primitive acts of thought, carried on involuntarily, result in certain products which constitute the simple objects of common knowledge; and we now propose to study these products. We consider first the perception of difference and simultaneity.

We have already seen that there can be no cognition of simultaneous objects without a perception of difference. That which enables the child to distinguish between colours and sounds, and tastes, and smells is a certain difference in the manner in which his senses are affected. But along with this difference of sensation there is a co-existence of them. Sensations differing from one another in quality are frequently experienced in regularly combined groups. A connection is thus formed between them, so that when one of the sensations is experienced the others are expected. This combination of a real with expected sensations constitutes an object. The formation of natural objects is therefore one of the most primitive products of thought.

All objects of knowledge are composed of a certain uniform group of sensations and expected sensations. But it takes a considerable amount of experience to determine accurately the exact constituents of objects. A child, for example, has been accustomed to take some disagreeable medicine from a spoon; this experience has been repeated so frequently that a firm connection has been formed between the appearance of the spoon in the hand of the nurse and the disagreeable taste of the medicine. To the mind of the child the hand of the nurse holding the spoon and the expected taste constitute an object; and the child's mistake is corrected only when some pleasant food is given to it by the spoon; then it learns that the taste of the medicine is not an invariable element of that cluster of sensations introduced by the sight of the spoon.

The most important of the sensations connected together in the formation of objects are those of sight and touch. The sense of sight gives only colours differing from one another in quality and occupying a certain bounded space. The sense of touch combined with the muscular sense of effort leads to the inference of hard or soft, rough or smooth resisting bodies existing outside of us. The motion of our limbs in contact with external bodies gives us the idea of distance. But it takes a considerable time for the child to connect the figured colour which it sees with the resisting body which it touches. The same sensations of colour and the same sensations of touch and muscular effort having been frequently experienced together the child learns to believe that the object which it sees, is the same as the object which it touches. Other sensations, as of smell, taste or sound are soon added to the group, and thus is produced the full conception of a natural object.

The distance of an object from the body is first measured by the motion of the hand towards it; the greater time and effort required to reach an object the farther it is believed to be away from us. But it is observed also that the greater time and effort taken by the hand to reach an object, the dimmer does the colour of the object appear to the eye; and the difference between clearness of colouring is still more observable when the process of *walking* is combined with the stretch of the arm. Other differences of appearance also are observed by the eye, as a greater or less size, a greater or less clearness in the appearance of the minute parts of objects and so on. These differences of appearance become gradually connected with the longer or shorter time and the greater or less effort required to reach objects with the hand, and thus we learn to *see the distance* of objects, or, properly speaking, to *infer* from visible appearances, what are the distances from us of the objects of touch. Hence we see that the perception of the objects of the external world is a combination

of intuition and inference. We perceive intuitively actual sensations; we expect, by an involuntary inference the other sensations of the group. We intuit sensations of muscular resistance; we infer some resisting external object. We intuit particular sensations of colour; we infer the distance to be passed over before particular sensations of touch can be reached.

The products of thought just described are founded mainly but not exclusively upon the relations of difference and simultaneity; other products of a primitive kind are founded mainly but not exclusively upon the relations of resemblance and succession. The child is conscious of the same sensation or the same group of sensations at successive times; the regular recurrence of the group of sensations leads to a belief in the identity of the object. Thus our belief in the permanence and independence of natural objects is the result of seeing that a present group of sensations resembles a group of sensations which we remember to have experienced some time ago. This recognition of similarity between present experienced sensations and past represented sensations is of the greatest importance as it is the foundation of our belief not only in the permanence of objects but also in the permanence and identity of ourselves. We have in this also the only means we possess of comparing all kinds of relations as well as objects with one another. Past periods of time, figures and dimensions of space, forthputtings of energy, experiences of pleasure and pain, are recalled and compared with present experiences; and thus our lives are enriched by being able to bring together the past and the present.

When the present group of sensations do not *exactly* resemble the representation of a past group we get the idea of sameness of kind but difference of individual object. The child at first is unable to distinguish between its mother and other ladies; but, soon differences are recognized and individuals distinguished. The ability to perceive minute differences in the midst of a general resem-

blance is necessary in order to enable us to distinguish one object from another; as the ability to assert with confidence the exact resemblance of a present object and a representation is necessary to enable us to *identify* an individual.

The uniform connection between succeeding events constitutes what we know of the causal relation. When a certain phenomenon is uniformly followed by another phenomenon, the two become so connected that when the one appears the other is expected. Uniformity of succession is thus an essential, though not the only essential element in the causal relation.

We thus see that the objects and relations of our common knowledge are produced by the exercise of involuntary and to a great extent unconscious thought. When we first waken up to conscious life we find ourselves in the midst of a world of objects regarding which we know a good deal. This primitive knowledge is the result, no doubt, of an almost unconscious process which has gone on during the dreaming sleep of infancy, as our bodies and minds were being gradually adapted to our surroundings.

Having discussed at length the doctrine of natural realism and the process of perception based upon it, we shall now refer to what we think an important mistake in Hamilton's classification of theories of perception. Natural realism as we take it, is a *psychological* doctrine which asserts the *phenomenal* duality of consciousness. But there is asserted by Hamilton an *ontological* duality or duality of *substance*, not as actually given in consciousness, but as testified to by consciousness. Hamilton appears to assume that the *phenomenal* duality of consciousness cannot be and has never been denied, whereas the *ontological* duality testified to, as he thinks, by consciousness, has very generally been denied. And his classification of theories is based partly upon a psychological and partly upon an ontological principle. The result of this is considerable confusion and inaccuracy. For example, Berkeley is put down



as a *Cosmothetic Idealist of the cruder form*, whereas he was undoubtedly a presentationist, and, according to our view, a natural realist. It is greatly to be regretted that Sir W. Hamilton's great learning is so often accompanied by a want of simplicity and accuracy.

We shall conclude our Note upon Natural Realism by proposing a classification of the elements into which objects of perception may be resolved.

All Objects of Perception consist of :—

A. Quantity founded upon co-existence and succession ; such as Trinal Extension, Figure, Position, Distance, &c.

B. Quality founded upon the difference and association of sensations, and divided into particular qualities according as

I. They require for their perception tactual contact or resistance.

1. *Hardness, roughness, &c.* known by the tactual sensation and muscular effort in pressure or motion.
2. *Taste*, known by the tactual sensation and a chemical solution of particles in the mouth.

II. They do not involve contact with the object.

1. *Colour*, in which the sensation is perfectly projected so that there is no conscious inference connecting it with the object.
2. *Sound*, in which the sensation is imperfectly projected requiring a conscious inference to connect it with the object.
3. *Smell*, in which the sensation is scarcely if at all projected requiring the assistance of other senses to lead to the inference of its connection with the object.

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## NOTE F.

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### CLASSIFICATION.

The reason why we classify objects and relations is that we may thereby systematize our knowledge. The knowledge of an infinite number of individual things, without bringing together resembling things and separating differing things, would simply be confusion—a class of images without order. We arrange the objects of our knowledge into classes in order the more clearly to understand them.

The most general principle of classification may be thus



expressed :—*Things which resemble one another are to be united into one class ; things which differ from one another are to be arranged in separate classes.* For example, if we have before us on a black-board a large number of different mathematical figures, we should select from them figures having three sides and put them into one class ; figures having four sides or more we should arrange in other classes. The class of three-sided figures being constituted by their general resemblance we should denominate triangles. But a study of these triangles would reveal that there are differences amongst them, some have all their sides equal ; some have two of their sides equal ; some have all their sides unequal. Why is it then that we arrange these differing figures in the one class, triangle ? Manifestly because the general resemblance in having three sides and three angles is of greater importance than the minor differences in the lengths of the sides or the sizes of the angles. Hence we arrive at a modification of our general principle :—*Points of resemblance should be employed to constitute a class when they are more general and more important than points of difference between individuals.* And when we have constituted a class by means of certain general resembling qualities, we may make use of minor points of difference for the purpose of constituting sub-classes or varieties. As *e. g.* triangles may be equilateral isosceles, scalene and so on.

The name by which we designate a class is called a common term ; although there are certain modified forms of classification whose names we do not call common terms. We frequently classify objects for the purpose of *counting* them without reference to other important principles of classification ; and we get the classes of numeration,—tens, hundreds and so on. We classify objects from some superficial or arbitrary point of view ; as trees into a *forest*, soldiers into a *regiment*, geese into a *flock* and so on. Here the classification is founded upon the principle of general resemblance and contiguity in space, and we call the term

by which such classes are distinguished a *collective* term. Again when we study *inorganic substances* as gold, silver, lead, we observe that the character of these metals does not depend upon the size or figure of the pieces. A minute particle of gold possesses the same qualities as a large nugget; and thus the mechanical or chemical properties of metals are taken into account in their classification, other points of resemblance or difference being neglected. The names by which we indicate these inorganic substances are called *substantial* terms. And as these substances are not divided into *individual* objects, but simply into greater or smaller *pieces*, the term cannot be said to denote individuals, but only an object of indefinite shape and size possessing certain qualities. Ascending higher in the scale of existence, we reach organic objects, in which we have a certain unity produced by nature which we cannot divide without destroying the object. This impossibility of physical separation without the destruction of life has caused these objects to be called *individuals*. And it is with reference to them that the most important problems of classification arise.

If we wish to examine, for the purpose of accurate knowledge, all the organized individuals discoverable, we must first adopt some criterion by which we can distinguish them from inorganic elements. This criterion must be found in all the individuals; and it must form a clear distinguishing line separating them from things inorganic. An accurate description of what is common to all organic beings constitutes a definition of the class. And the name, *organized beings*, *organized individuals*, or whatever it may be is said to connote these common qualities. Examining more minutely into the character of organic beings, we observe some of them possessed of powers of locomotion while others are not. Four-footed animals, birds, fishes, insects and so on wander about in search of food; while trees and smaller plants are rooted to the soil. This and other differences serve to distinguish organized beings into

two great classes : those which we call animal ; and those called vegetable. The connotation of *animal organized beings* and *vegetable organized beings* comprehends both the qualities common to them all, and the qualities in the one case, possessed by all animals, and, in the other case, possessed by all vegetables. Thus, as we sub-divide a class, the concept becomes richer, but the number of individual to which the name is applicable is smaller. If now we confine our attention to *animal organized beings* we observe important differences amongst the individuals included in the whole class. Some of them possess a backbone or vertebra which serves as the foundation or support of the other parts of the body ; some of them have hard rings going round the body and protecting the softer parts within ; some of them have solid shells within which they live ; while some attach themselves after the manner of plants to some more solid foreign body. Thus we have four sub-divisions of the animal kingdom :—*vertebrated animals*, *articulated animals*, *mollusca*, and *zoophytes*. Now, as before, if we add to the concept of *organized animal beings* the qualities indicated by the names *vertebrated*, *articulated*, *mollusc*, and *zoophyte* we enrich the concept with a fuller meaning ; but we restrict the application of the name. We might again take the class *vertebrated animals*, and observe the distinctions belonging to individuals of it ; and by adding these distinctions to the general concept, we would at the same time enrich the concept and constitute a number of smaller classes. In this way we might go on enriching the concept and sub-dividing the classes until we reached a class which could not be farther divided. The concept of this *lowest species* would comprehend all the qualities of the concepts of the larger classes to which it belonged ; but it would exclude many qualities belonging to individuals of the species. Thus no matter how far we go in the process of sub-division we never reach a class so small that its concept comprehends all the qualities of an *image*. It is absolutely essential to classification that some

of the peculiarities of individuals should be struck off in forming the concept, unless indeed we can realize the impossible supposition that there might be a number of organized individuals found *exactly alike* in every quality. Moreover the determination of the *lowest species* is, to a certain extent, arbitrary, as there may often be a doubt whether a quality common to a number of individuals is to be considered a mark of a species, or merely of a subordinate variety.

Now, it must be remembered that this process of classification is purely a mental arrangement of individual objects of knowledge, although it is founded upon actual distinctions and resemblances observed amongst them. And hence the concept of any class is only a mental object composed of represented qualities separated from the images of the individuals belonging to the class. This concept as represented in the mind is an *individual* object of consciousness; but its peculiarity is that a *presentation* of it may be obtained from a great number of objects. And hence some have said, although erroneously, that the concept of a class is *general*. It is but a single object of consciousness, but it *symbolizes* a large number of objects, just as a common name *is applicable* to a large number of objects. The only difference between a concept and a name is, that the former is a collection of qualities abstracted from individuals, according to some principle, while the latter is a sound more or less arbitrarily associated with the individuals which agree in the possession of the qualities of the concept.

In considering the doctrine of classification we must study it also as applied to *actions*, or *modes of action*, or *complex relations of things*. In the phenomena of the mind, for example, there are important difference. All mental phenomena agree in this, that we are conscious of them. But some of our mental phenomena have no external object corresponding to them and revealed by them,—they are purely subjective in their character; these are feelings.



Some again have a special object either present or past ;-- these are cognitions. While others have an object expected and lead to some action ; these are volitions. Thus we can classify mental actions ; but the principal difficulty here, which we do not meet with in the case of organic individuals, is that we do not actually find these mental actions distinct and separate from one another. There is a complexity and intermingling of them which renders their classification difficult. Again we distinguish different men from one another by their different *modes of action*. One man is very energetic and regular in the performance of his duties ; we classify him with energetic or industrious men. Another man is noted for his want of sympathy with suffering or for the cruel actions which he performs ; we name and classify him a cruel man. Thus every adjective which we apply to an individual implies a conscious or possible classification, because it denotes a quality which may be found in other individuals and may therefore be the basis of forming them into a class.

There are also complex united systems of things which are to be classified. Such are a steam-engine, a threshing-machine, a family, a tribe, a government, a system of planets, a combination of forces, and so on. The same principles of classification as we have already explained apply to these complex unities, the only difference being that the relations constituting the unity are frequently not objects of sense-knowledge, but are apprehended only by the intellect. The relations of persons, for example, constituting a government cannot be perceived by the senses ; they are so complex and remote from sense that we think of them as entirely different from ordinary things known through sense. And yet they are all ultimately reducible to objects of sense-perception. The essential feature of government consists in the relation between one person who issues a command and a number of other persons who, for fear of punishment, are led to obey the command. But this simple relation is usually combined along with



many others into a system of great complexity constituting what we understand by the word government.

Having explained and illustrated the general principles of classification we now proceed to study the process of assigning any particular object of our knowledge or thought to its appropriate class. To be able to do this correctly is a matter of great importance, as we do not know an object accurately until we know what classes it belongs to. Before we can classify any individual it is manifestly necessary for us to know that it possesses the essential qualities of some class; having ascertained this we immediately assign it to that class. We see, for example, an object rooted to the soil, evidently organic, and having a stem, branches, and leaves. Knowing that these qualities are possessed by many vegetables we assign our individual to that class. A further examination reveals the fact that the object has flowers growing upon it, that the leaves are netted instead of parallel veined, that it has a woody stem composed of a number of circular layers around a central pith. Knowing something of botanical classification we call our plant an *exogenous flowering plant*. Pursuing our examination into minute characteristics of the flower and the leaves and the seeds we succeed in determining the Order, the Genus, and the Species of the plant.

Thus it appears that all that is necessary in classifying an object is a knowledge of the characteristics of the class to which it is problematically to be referred, and a knowledge derived from examination that the object in hand presents these characteristic qualities. Having discovered the important qualities of an object we look about, unless we already know, for some class whose concept comprehends these qualities; and having found it we unite by a synthetic act the individual with the other individuals of the class.

As long as we are dealing with inorganic elements or organic material bodies there are no great difficulties in the way of classifying individuals. We are now able to

apply chemical tests with definite and precise results to all inorganic elements; and the microscope and dissecting knife enable us to examine the minute parts of organized objects with great accuracy. And consequently it only requires a certain amount of practical training and skill to refer any object with precision to its proper class. But when we come to the more complex relations of human life and action much greater difficulties present themselves. These difficulties arise from the greater complexity of the phenomena with which we are dealing, from the want of such a precise system of classification as we have with reference to material objects, from the impossibility of observing such clear distinctions as are seen between organic things, and from other causes. The following are some of the objects of thought in connection with human life and action which present themselves for study and classification :—The phenomena of consciousness ; mental modes of action constituting character ; bodily habits ; languages ; general forms of body and countenance ; national customs and superstitions ; family institutions ; tribal habits and laws ; forms and characteristics of governments ; and other features connected with social life which will readily suggest themselves. A few illustrations will show the difficulty of reducing these things to scientific system.

When we observe an action done by some person, we often experience a feeling of pleasure or displeasure, of approbation or disapprobation, and we judge that the action is either right or wrong. Now students of the human mind cannot agree as to what is the true nature of this moral feeling or judgment, as to whether it is primarily a feeling or primarily a cognition, as to whether it is a simple and original phenomenon of human consciousness, or a complex and derived phenomenon found only in human minds which have attained a certain degree of advancement.

Again when we try to estimate the character of the men whom we meet there is room for great doubt and uncertainty. We sometimes observe men giving large sums in

charity to the poor or otherwise trying to ameliorate their condition; and we should probably think that these were *benevolent* men. But it is possible, and many times true, that men perform apparently benevolent actions from some selfish motive, and the discovery of this fact makes it impossible for us to classify them as benevolent. The motive by which an action is inspired constitutes the most essential element of the action, and the difficulty of ascertaining its character renders it difficult to characterize the action.

Suppose again that we wish to determine whether a certain writer is a poet, or a philosopher it is not in all cases easy to do so. There are versifiers who are not poets; and there are many who write about philosophy but are not philosophers. And critics are not by any means agreed as to what it is that constitutes a man a poet or a philosopher. Thus we have here a two-fold difficulty; the essential qualities of the classes are not determined with precision; and even if they were determined it is no easy matter to say in any particular case whether a person possesses them. It requires a certain amount of poetical or philosophical genius to estimate the quality of poetical or philosophical writings. Students of language also find great difficulty in classifying the different languages of mankind. Leading distinctions have no doubt been observed and form the basis of a provisional classification, but the science is yet in its infancy and much has to be done in the way of determining the characteristics of different languages and arranging them into a system. Similar remarks might be made with reference to most of the problems of classification which arise in connection with the intellectual, moral, and social life of man. And we may now point out a few leading errors which we are apt to make in our study of the phenomena in question. (1) Errors are often made in failing to distinguish the essential or predominating character of that which we are examining. A man may conceal under a harsh and forbidding exterior a really kind and generous heart; the manner of a man is most frequently that by

which he is at first judged ; and thus people frequently form an erroneous judgment by not looking through the manner at the more essential qualities of mind and conscience.

(2) Errors in classification arise from supposing things to differ which in reality are the same or similar. For example Sir W. Hamilton supposed that Dr. Reid's theory of perception was quite different from and inconsistent with the representative theory held by Dr. Thos. Brown and others of Reid's predecessors. In truth, although there were minor differences, the essential doctrines of Reid's theory are not what Hamilton supposed and are not so different from the doctrines of Brown as to entitle them to be put into a different class. Real resemblances are often concealed under a difference of phraseology, and it is an important function of thought to penetrate beneath the verbal expression of doctrines to the ideas taught.

(3) Errors in classification arise from supposing things to resemble one another which are in reality different. Things indicated by the same word, for example, especially if the things indicated are mental in their character, are at first sight supposed to be the same, but in reality they are frequently found to be very different. Names, in the course of time, often change their meaning, and it is frequently very difficult to observe and discriminate the different meanings which, at successive times and as used by different persons, they carry with them. The philosophical name *idea* presents us with a good example of a word which means very different things as used by different writers or even by the same writer. Not only may single words mean different things but also similar forms of expression may be very ambiguous in meaning ; of this good specimens are given in many of the ancient oracles which were usually susceptible of quite different interpretations. And the writings of sophistical reasoners are usually filled with forms of expression which convey one meaning to the mind of the reader, but are used to express quite a different idea of the writer's mind.



The above are the principal sources of error in classification; and thus it appears that there are three important conditions of making an accurate classification. These are:—to be able to distinguish, for the purpose of comparison, the essential from the subordinate qualities of the things with which we are dealing; to be able to detect resemblances even when concealed under manifest differences; and to be able to detect differences although concealed by apparent resemblances. Having selected essential qualities of things and observed resemblances and differences the process of classification is obvious,—things which resemble one another are to be classified together, and things which differ from one another are to be arranged in different classes. Thus the most important and the most difficult part of the process of classification consists in the analysis and comparison which must precede the synthetic act in order that it may be of any value. The synthetic act of classifying is obvious and necessary as soon as the preceding analysis and comparison are completed.

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## NOTE G.

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### THE LOGICAL DOCTRINE OF THE PROPOSITION.

In a preceding Note we pointed out that there are four great relations in which the phenomena of our consciousness must stand to one another,—the relations *viz.* of Difference, Resemblance, Simultaneity and Succession.

If now, we consider the *objects* of our knowledge we shall reach another division of relations subordinate to the above. All objects which are related to one another may be distinguished into *quantities* and *qualities*. The latter correspond to the *sensations* of which we are or may be conscious; the former consist of the *Form* of sensations or objects, namely, the space, time, motion and so on, by



which sense objects are conditioned. Again the relations of all objects or classes which may be predicated are either *internal* or *external*; the former being the relations of objects or classes to internal constituent qualities or parts, the latter to other external objects or classes. Internal and external relations may be both quantitative and qualitative, and thus we have a four-fold division of relations into:—I., Internal Quantitative; II., Internal Qualitative; III., External Quantitative; IV., External Qualitative. This classification is founded upon and not exclusive of our former division of the four primary relations, as will be seen from the following table:—

<p>I. Internal Quantitative Relations comprehend:—</p> <p>Relations of figure, size, shape, motion, number, and so on, of the constituent parts or elements of objects, classes or systems. These relations may be any of the four primary relations or any combinations of them.</p>	<p>II. Internal Qualitative Relations comprehend:—</p> <p>Relations between the qualities of objects of our knowledge, or classes of objects, these qualities being made known to us by the sensations or ideas which they produce in our minds.</p>	<p>III. External Quantitative Relations comprehend:—</p> <p>Relations of any of the four primary kinds or any combinations of them between the figure, size, shape, motion, duration, number, and so on, of objects, classes or systems which are external to one another.</p>	<p>IV. External Qualitative Relations comprehend:—</p> <p>Relations between external objects or systems with reference to qualities made known by sense, moral or aesthetic qualities, characters, habits, conditions and any other characteristics of objects of knowledge which may be appropriately called qualitative.</p>
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We shall give illustrations of these great classes of relations.

### *I. Internal Quantitative Relations.*

When we construct a geometrical figure, as that of the fifth or the forty-seventh proposition of the first book of Euclid, we constitute a unity, and the subsequent demonstration is a comparison of the different internal parts in respect of their magnitude, and the inferences which result from that comparison. Similarly, many of the propositions of geometry consist of a combination of predications regarding the internal quantitative relations of different kinds of figures.

The astronomer who studies the motions of the different bodies belonging to the solar system is engaged with internal quantitative relations. The solar system as a whole constitutes a unity, the elements of which are the sizes, masses, distances, orbits, velocities, and so on, of the various bodies which revolve around the sun or the primary planets, and of the central luminary.

The mechanical engineer is similarly occupied when he arranges the figure, strength, motion, position, and so on, of mechanical structures, as houses, bridges, or machines. Comparative anatomists are able to complete the skeletons of animals, having given them certain of the bones. This ability is the result of careful study of the internal quantitative relations of the bodies of animals.

## *II. Internal Qualitative Relations.*

The qualities of single objects of sense often require to be studied and compared in the interests of science. The chemist in his analysis of the various organic and inorganic substances which come under his notice is engaged in the study of internal qualitative relations. The process of classification involves a careful examination and comparison of the internal qualities of bodies or things classified. The composition and criticism of the productions of the poet, musician, statuary, and painter, consist chiefly of the arrangement and examination of internal qualitative relations. The same relations are the objects of study when we examine the characteristics of a man, of a nation, of a government, of a religious system, of a systematic body of doctrine of any kind, of an oration, in short of any of the vast variety of things known to us which are characterised by internal differences of quality or powers of exciting ideas.

## *III. External Quantitative Relations.*

In classification, when the extension or quantity of one class is compared with that of another, we are dealing with external quantitative relations. Many geometrical propositions are concerned with these relations. Compari-

sons of the weights, masses, figures, proportions, velocities, numbers, and so on, of distinct bodies not forming parts of a connected system, have for their objects external quantitative relations.

#### IV. *External Qualitative Relations.*

The botanist, zoologist, and chemist, in comparing the different specimens of objects which comes within their respective spheres to study are concerned about external qualitative relations. So is the ethnologist in comparing the characteristics of different races of men, the philologist in comparing the principles of different languages, the mythologist in bringing together the myths, legends, and folk-lore of different countries, and the comparative economist in studying together the different social and political institutions which have sprung up in different countries at different times. This study of the qualitative relations of things and systems has sprung into importance chiefly in modern times and is a very powerful method of scientific discovery. In the comparative study of physical characteristics, of moral and social habits, of myths, of religious beliefs, of languages, of institutions, of laws, and of historical events, consists the only available effectual method of discovering the beginnings and the principles of human progress.

Now all thought is concerned about some, or all or various combinations of the relations which we have just now classified; and the result of every comparison as well as the expression of every relation, is a *predication* or a *proposition*. In the exposition of our own views, we shall use the former term; in the criticism of current logical doctrine we shall use the latter. *Predication*, we may thus define as *the assertion that one object or element of our knowledge or conception stands, or does not stand, in some relation to one or more other objects or elements of knowledge or conception*. In order that we may clearly understand the nature and forms of predication we shall study a few examples of

it. And we shall begin with the study of examples of the predication of internal relations.

When we say, *this rose is red*, we affirm an internal relation of simultaneity or co-existence. The redness is a quality found co-existing with all the other qualities which make up our knowledge of the flower. The uniform and inseparable co-existence of these qualities causes us to think of them all as making *one object*; and when we say *this rose*, we mean by it the *one object* made up of all the qualities. The first term of the above predication calls up an image before consciousness; the second term is one of the elements of the image singled out for the moment for particular attention; the predication affirms that the element forms a part of the whole object, or co-exists with the other element of it uniformly and inseparably.

*The horse has four legs.* This predication also affirms a certain internal relation of the object *horse*. The first term of the relation denotes a particular object composed of many parts and qualities. The second term of the relation expresses particular elements or parts of the whole object. The predication affirms a relation of co-existence of that regular and inseparable kind which constitutes the co-existing qualities an *individual*.

All predications which we make regarding the internal constitution of objects are of the same nature as the above, and have about the same significance. The *form* of the predication is a matter of comparative indifference, as we are now engaged in the study of *thoughts* not of *words*. The same relation is expressed by all the following forms:—The rose *is* red; the horse *has* four legs; the house *consists of* six rooms; England *contains* Middlesex; the lion *is possessed of* a shaggy mane; the solar system *comprehends* the sun, planets and satellites. And in all these cases the first term of the predication denotes a whole object, and the second term expresses some quality, part, or element of the object.

Not only may we predicate internal relations of material



objects and systems of objects, but also of mental and social phenomena. The following are examples of such predications:—A moral judgment consists of intellectual and sentimental elements; the family is composed of a husband, wife, and children; the Government of England includes the Sovereign, the House of Lords, and the House of Commons. The meaning of the predication in all these cases is the same as before.

There are other predications of relations which may, perhaps, be called internal, but which should be distinguished from the above. These are predications of *intransitive actions*. We may give as examples of these:—The dog barks; fire burns; the sun shines; the river runs; the wheel turns, and so on. In all these predications, and such as these, there is involved the idea of some thing *proceeding from* the first term of the relation. *The dog barks*, means a certain sound proceeds from the dog. *Fire burns*, means that a certain sensation is experienced after contact with fire. *The river runs*, means that a body of water occupies different places at successive times. *The wheel turns*, means that the different parts of the wheel successively occupy different positions. The first term of each of these predications denotes some object; the second term implies some sensation or action; and the predication affirms a relation of *succession* between the co-existing qualities of the object and the sensation or action predicated.

We now proceed to the examination of external relations of objects as affirmed or denied in predications, and, for the sake of convenience, shall consider indiscriminately quantitative and qualitative relations. And first amongst these we have relations of difference. A relation of difference, we have seen, is absolutely necessary to enable us to distinguish one object from another. If two objects are *exactly alike* in quality they must, at least, have different *spatial positions* to be distinguishable. Relations of difference are usually expressed by the comparative degree of



the adjective which expresses the quality with reference to which two objects are compared. The following are examples:—*Red is brighter than green.* *Lead is heavier than wood.* *The sun is larger than any of its planets.* The conceptions of "*Paradise Lost*" *are more sublime than* those of "*The Deserted Village.*" *A child is not so strong as a man.* *A greyhound can run faster than a bull-dog.* The scenes of heaven *are more glorious than* can be expressed by language. *The fruit of the pine-apple is not the same as* that of the orange tree. In all these cases, and in others which might be adduced, we see that the two terms of the predication are the two objects compared; and the predication asserts that a relation of difference, in some particular respect, exists between them. The words which we have italicised in the above examples *express the relation predicated* between the two terms; and it is manifest that it is of no consequence which term of the relation comes first in the predication. The substitution of the second term for the first would simply involve a slight change in the *expression*, but no change in the *thought*. *Red is brighter than green*, is in thought the same as *green is not so bright as red*. And so of all the others. Frequently we have to express a difference between two objects which consists in the fact that, along with a certain resemblance, the one possesses qualities which the other does not. For example, the bat differs from the mouse in that the former has membranous appendages answering the purpose of wings, while the latter has not. The zebra differs from the horse in having a regularly striped skin. The whale differs from the most of the mammals in being an aquatic animal. In such comparisons as these it is not easy to adopt such an expression as will show the difference predicated so clearly as in the former cases; but the *thought* is equally simple. There are two objects compared; they are found to differ in a certain respect; and the predication affirms that they do thus differ. And, as before, it is of no consequence which term

of the relation comes first in the predication; the thought is the same whatever be the particular mode of expression.

Amongst the external relations of objects, both in respect of quantity and quality, that of resemblance is of great importance. It is in consequence of resemblance in certain respects that we classify objects together and constitute them a unity. It is in consequence of resemblance between objects that we draw inferences regarding them. We are not now concerned, however, with these uses of resemblance, but only with the nature and expression of the predication of resemblance. Let us study some examples:—

This line *is of the same length as* that. These triangles *are all equal-sided*. This piece of lead *weighs* two pounds. In the first and third of these examples there is a comparison of *two* objects, and a predication that they resemble one another; in the second the predication of resemblance has reference to *several* objects. When the terms related to one another in a predication of resemblance are common names, there is always involved a comparison of several objects. For example, when we say, *horses have four feet*, we mean that all objects known by the term horse resemble one another in having four feet; here we predicate a relation of resemblance between all known or conceived individuals. And, as we said before, we imply that *each* horse has four feet—an internal relation of co-existence.

We often predicate resemblance between things which are not exactly alike, but yet sufficiently alike to be classified together. When we say *crimson is like scarlet*, we mean not that they are exactly alike, but that they are the *same kind* of colour, and thus distinguishable from blue or green. When we say that *the sheep resembles the deer*, we mean to predicate resemblance only in certain respects, and if we state our meaning fully we will particularise the points of resemblance. The most of the resemblances which are affirmed in predication are only partial; when we affirm a complete resemblance we call it an identity, an equality or some such name.

Although mental phenomena and material phenomena are thought to be entirely different in kind, yet they are frequently employed to illustrate one another. We speak of a *lofty thought*, thus implying a resemblance between the excellence of the thought and the altitude of some material object. We use *light* as a symbol of *truth*, or we say that *light resembles truth*, although there is in reality no resemblance whatever between them in themselves ; but in their results there is a resemblance since the appearance of light and the imparting of truth are both productive of knowledge in the mind. The relation between a symbol and that which is symbolized, between a sign and that which is signified, is usually either a direct resemblance between the two things, or is accompanied by a resemblance amongst some of the circumstances or results connected with the two things. Sometimes, of course, this is not so, as in the case of the relation of a word to that which is denoted by it, where there is now often no resemblance, although there is reason to believe that originally the application of names was founded upon resemblance.

The relations of simultaneity and succession between mutually external objects are often the subjects of predication. As when we say :—*Milton was a contemporary of Cromwell ; John and James were class-fellows ; soldiers on parade keep step with one another*. Or when we say :—*Chaucer preceded Spenser ; after the flash of lightning a loud peal of thunder was heard ; a cause is always followed by its effect*. It will be observed that the same relation of simultaneity or succession may be expressed in many different ways ; and so far as *thought* is concerned, it is of no consequence by what words the relation is indicated, provided only it be indicated clearly. It will be observed, too, that the order in which the objects said to be related occur in the predication is immaterial. The sentence, *Chaucer preceded Spenser* is the same as *Spenser followed Chaucer*. The predication consists in asserting that a relation of

succession exists between the two individuals, specifying which comes first. And, with reference to all the other examples, it will be admitted that the form of predication is unimportant, provided only that it be clearly expressed what objects are related to one another and what is the relation between them.

We have hitherto confined ourselves as closely as possible to *simple* relations of difference, resemblance, simultaneity and succession; but in the great majority of predications the relations predicated are more or less *complex*; and often the relations *implied* in a predication are more numerous than those which are expressed. We may give examples of such complex relations.

*The judges in session, having tried the prisoner, agreed to find him guilty.* In this complex predication many relations are expressed and implied. The judges *sit simultaneously* upon the bench,—a double relation of simultaneity (1) amongst the judges (2) between the judges and the bench. *Having tried the prisoner*, expresses a continuous process and implies a multitude of relations; it also indicates that the action next asserted *followed* the trial. *Agreed to find him guilty*; here is expressed a relation of agreement amongst the legal opinions of the judges, and a relation of difference between the action of the prisoner and some law.

*John struck the table.* In this short sentence there are implied several relations. John and the table are in point of time *simultaneous*, in point of space *contiguous*; and contiguity is itself the result of the combination of several relations. The *stroke* of John is an *action*, and therefore involves *succession*, *viz.*, first the arm is raised; then it is gradually lowered, occupying successively different positions; and then it comes into contact with the table producing, probably, a sensation of sound and certainly one of touch. Thus this simple sentence predicates a complex series of relations between two objects, John and the table.

Many other examples might be given of complex rela-



tions being predicated between two or more objects ; and it would be a useful exercise in the analysis of thought for the student to examine and separate the relations expressed or implied in the sentences which he reads. We think it will be found that *all relations* may ultimately be reduced to the four simple ones which we have described ; and that all predications may be shown to consist of an assertion or denial, that one or more of these relations exists between two or more objects or elements of knowledge or conception.

We have now given and illustrated what we believe is a correct exposition of that most important act of thought which we call predication. It now remains for us, from the stand-point which we have endeavoured to establish, to take a view of the current logical doctrines regarding the proposition. These doctrines are found in all the smaller text-books of logic ; and they find a place also in many of the more elaborate expositions of logical science. Not, however in all, for we observe decided tendencies towards a departure from the traditional doctrine of the proposition in some modern writers of distinction. The leading features of the traditional doctrine are the following :—

Every proposition consists of *two terms* and the *copula*. The terms represent either concepts classes or individual things ; and the copula serves as the connecting link between them. The words which constitute the copula are *is* and *is not*, according as the one term is to be affirmed or denied of the other. The first of the two terms, that about which the assertion is made, is called the *subject* ; the second, that which is asserted or denied of the first, is called the *predicate*. The subject of universal propositions is said to be distributed, or applied to all the things denoted by it ; that of particular propositions is not. The predicate of negative propositions, being altogether denied of all the individuals denoted by the subject, is distributed ; that of affirmative propositions is not. The copula is simply the sign of the relation of the two terms to one another ;



it must not indicate the actual objective existence of the relation or the things related, nor the time when the relation existed, nor the degree of certainty with which the assertion is made. All these accidental things must be included in the predicate. It is always possible, after limitations and changes in the predicate or copula, to *convert* propositions, that is, to put the predicate in place of the subject, and the subject in place of the predicate ; and this conversion, being rendered necessary by the laws of the *sylogism*, is an essential part of the doctrine of the proposition. These are the principal points in the doctrine of the proposition regarding which writers upon logic are agreed ; but there are some points about which they are not agreed. They are not agreed as to the *character* of the *predicate*, some maintaining that it may be either denotative or connotative, others that it is connotative only. Those who believe that it may be denotative are not agreed as to its *quantification*, some holding that its extent should be explicitly stated in the proposition, others that its quantity should be determined by the ordinary rules. They are not agreed as to the *meaning of the predication*, some holding that the subject and predicate are simply asserted to be two different names of the same thing ; some that the predicate consists of attributes asserted of the subject ; and some that a relation of mutual co-existence or mutual inclusion or exclusion or congruence or confliction between the two terms is asserted. These differing views may be referred to in the following criticism ; but we shall give the most of our attention to the foregoing doctrines which are generally agreed upon. For the sake of clearness we divide the subject of our criticism into the following parts :—1. The terms of the proposition ; 2. The relation between these terms as expressed by the copula ; 3. The doctrine of distribution ; 4. The doctrine of conversion.

(1). In examining the terms of the proposition our principal aim will be to ascertain whether they correspond with the terms of predication. All predications, we have

already shown, consist of the assertion or denial that one or more objects or elements of knowledge or conception holds some specified relation to one or more other objects or elements of knowledge or conception. All predications have, therefore, two terms related to one another, and the assertion of some relation existing between them. And we have to enquire whether the terms of the proposition, as described by logicians, are the same as the terms of the predications which we consciously make. In every proposition, put into logical form, the predicate must comprehend all the elements of time, mode and action, which are usually expressed by verbs and adjectives or adverbs. A few examples of propositions may form a good basis for our criticism.

*Horses are vertebrated.* In this predication we affirm that each of a class of individual things possesses a certain quality or rather a certain part called a vertebra. Two objects of thought are before consciousness, the image of a horse or horses and that of a vertebra; and we affirm that the latter constitutes a part of the former. Thus we here assert an *internal* relation between the two terms; and this internal relation is correctly expressed by the word *are*. Neither can there be any doubt that the terms of the proposition correspond to the terms of the conscious predication. But, suppose we modify the proposition, and assert that *horses belong to the class of vertebrata*, it appears manifest that the predication which we make is quite different from the former one. Instead of predicating an *internal* relation we now predicate an *external* one; we assert that the class of horses are included in a much larger class of vertebrated animals. In the former proposition we do not think of any other animals except horses; in this proposition we must think of other animals constituting a large class which includes horses. Now the scholastic doctrine of the proposition teaches that the predicate *vertebrated* is either connotative or denotative, and thus fails to distinguish between the two important kinds

of predications above illustrated. This ambiguity in the meaning of the predicate in such propositions should not be recognised either in psychology or logic; a predicate should mean either one thing or another, and the mode of expressing it should indicate which meaning is intended to be conveyed.

Again, *the sun illuminates the earth*. In this predication we have in thought two objects which are the terms of the predication, and a certain relation existing between them, namely, that light proceeds from the first to the second and thus makes its surface visible to our eyes. This proposition when put into logical form becomes, *the sun is a-body which-illuminates-the-earth*. There the subject is *the sun*, and the predicate is *a-body-which-illuminates-the-earth*, i. e., the sun again, along with its relation to the earth. Now we think that an appeal to consciousness will show clearly that the terms of this proposition, after being put into the logical mould, do not correspond to the terms of the predication which we consciously make. The two objects which we think of as related are, plainly, the sun and the earth, *not* the sun and a-body-which-illuminates-the-earth. And it should, therefore, appear that the so-called logical form of this proposition has no foundation in the facts of consciousness. *Gold is heavier than iron*. Here we have the image of two substances before consciousness, and we assert a certain relation between them, namely, that the one substance is heavier than the other. But according to scholastic doctrine, the predicate of the proposition is not *iron*, but *heavier-than-iron*. In this case also an appeal to consciousness will show that the second term of the predication, said to be in a certain relation to the first, does not correspond to the predicate of the logical proposition.

Many other propositions might be adduced which would show that in the majority of cases the terms of the logically-formed proposition do not correspond to the terms of predication which are thought of in consciousness as related

to one another. We have seen and admitted that, when a proposition expresses an *internal* relation of an object or class to some of its constituent parts or elements, the scholastic proposition may be correct and adequate. But, when *external* relations are predicated between objects, the logical proposition is quite inadequate to their expression ; the terms of the proposition do not correspond to the terms of the predicated relation.

(2.) We now consider the relation itself predicated between the objects or elements compared. Is this relation accurately expressed by the logical copula? According to logical doctrine the relations expressed by the copula are those of genus, species, difference, property, and accident ; the predicate of a proposition may stand to the subject in any one of these relations. The two first of these are external relations ; the remaining three are internal. Now it is manifest that these relations have all reference to the process of *classification* ; and it appears equally manifest that there are a multitude of other relations which form the subjects of predication that have no reference to classification whatever. When we say, for example, *lightning precedes thunder*, we do not mean to classify either lightning or thunder with any other phenomena whatever, nor have we in our mind any fact or process involved in classification. We do not mean that the fact of preceding thunder is a differentia or a property or an accident of lightning, or that that fact distinguishes lightning from any other phenomenon. We mean simply to assert that a certain phenomenon, lightning, usually or always, is observed, before another phenomenon, thunder, is heard. And this relation of antecedence or succession is certainly not expressed by the copula. Again, when we say, *elephants are quadrupeds*, these words properly express an *internal* relation between the animals spoken of, and the quality indicated by the predicate, the possession of four feet. But if this proposition is made to mean, *elephants belong to the class of four-footed animals*, we have



an *external* relation asserted, and the copula is not adequate to its unambiguous expression. In the same way it might be shown that all the other external relations of difference, resemblance, co-existence and succession, and their various combinations, cannot be expressed by the copula. In fact, logicians do not pretend that they can, because they always consign the expression of these relations to the predicate, thus playing false with the phenomena of consciousness and producing monstrous forms of language. It appears then, that psychology offers no foundation for the doctrine that the copula is the only proper expression of the relation between the terms of predication; and it might also be shown that there is no foundation in language. In many languages which are unquestionably expressive of thought there is found no such abstract verb as our *is*. And, even in our language, the substantive verb requires to be divested of all its meaning before it is fitted for logical use. Thus, it comes to be but an empty symbol, which differs from the symbols of mathematics, in that while each one of them has a definite meaning and represents a relation in thought, it is introduced for the purpose of putting aside the relations thought of which it cannot express.

(3.) The doctrine of distribution is manifestly founded upon facts connected with classification. In the classes which we construct of organized individuals there are some qualities which are found in all the individuals denoted by the class-name; there are other qualities, called accidental, found in some individuals but not in others. We are able, then, to predicate that *all* the individuals of the class possess the former kind of qualities, but only that *some* of them possess the latter kind of qualities. Again, when we predicate an external relation of certain objects, as when we say "birds belong to the class of oviparous animals," it is evident that we speak of *all* birds, but only of *some* oviparous animals; and in this case the first term of the predication is distributed, the second not. But if we say "birds do not belong to the class of quadrupeds," we speak



of all birds and all quadrupeds, and assert that the one class is altogether excluded from the other. In this case both the terms of predication are distributed. Thus, when the first term of the relation denotes a class, we indicate its distribution by prefixing the words all or some. When the second term denotes a class of greater extent than the first, we naturally indicate by the form of the predication whether we speak of all or some of the individuals belonging to it; and at least the accurate expression of thought demands that the distribution of both the terms of the relation should be unambiguously expressed.

These principles of distribution, properly applicable only to terms which denote classes, are applied by logicians to all kinds of terms and all kinds of propositions. All universal propositions distribute their subject, while particulars do not. All negative propositions distribute their predicate, while affirmatives do not. Now, if we had not a particular system to maintain, it might appear plain to us that the principles of distribution cannot be, without absurdity, applied to anything which does not admit of distribution or non-distribution. If we say, for example, "the Duke of Wellington is a man," neither the first nor the second term of the predication is a class name as here used; and were it not that we import from the process of classification, ideas foreign to the subject in hand, we should never think of the distribution either of "the Duke of Wellington" or "a man." Logicians, however, must reduce every proposition to the normal form, and so they make this a universal affirmation and write it "all of the Duke of Wellington is one of the class—man."

Again, if we take a proposition expressive of an internal relation, we shall see that the rules of distribution are not applicable. In the proposition "roses are sweet-smelling," the first term of the predication may denote either all or some roses according to our opinion of their odour. But the second term "sweet-smelling" expresses a *quality* possessed by roses, and when we speak of a quality, we surely

mean the whole of the quality, and it seems absurd to say that the name of the quality is either distributed or not distributed; if we do so we apply a distinction to it which is plainly not applicable.

This objection, however, is got over by changing the predicate and thus forming *another proposition*, thus:—"Roses are sweet-smelling flowers," meaning "roses belong to the class of sweet-smelling flowers." But it is surely objectionable, in order to get a proposition into such a form that the rules of distribution may be applied to it, *to change the relation* predicated in it. This proposition in its first form asserts an *internal* relation to the second term of which the principles of distribution do not apply; and in order to bring it into such a form that the second term may be tested by the laws of distribution, it is changed so as to express an *external* relation. Surely a correct psychology offers no foundation for such a procedure.

It could be easily shown that the laws of distribution are inapplicable to many other kinds of propositions, of which we may give the following as examples:—The line A is equal to B; the sun is brighter than the moon; the dawn precedes the day; silver is not so valuable as gold; the Prince of Wales shot an elephant; stars bespangle the sky. In all these propositions relations are predicated between two or more objects, the relation being expressed with perfect clearness, and in none of them can we say, with any degree of appropriateness, that either term of the relation is distributed or non-distributed; the distinction is inapplicable and foreign to the subject.

Our conclusion, founded upon an examination of the meaning of propositions, may be thus stated. Only those terms which denote classes of things can be properly spoken of as being totally or partially distributed; the names of single qualities or objects should not be quantified; but wherever a class-name, admitting of quantification, should, for the sake of clearness have its quantity made known, we have a right to insist that its quantity

should be explicitly stated. This conclusion is founded upon the great law of expression,—whatever is contained in thought should be accurately expressed in words; whatever is not contained in thought should not be expressed in words. We do not *think* of the quality affirmed in the predicate of a proposition as being applicable to many or few objects; we should not therefore quantify it. But where the subject or predicate is a class-name, wholly or partially distributed *in thought*, its distribution should be expressed *in language*.

(4.) We now come to the doctrine of conversion. For the sake of the transposition of terms required by the syllogism, it is considered by logicians of importance, that all propositions should be convertible; and there are certain well-known laws laid down for their conversion. The laws of distribution receive their full importance only in connection with conversion; as the importance of the laws of conversion is seen only in relation to the syllogism. The great law of conversion is,—that no term should be distributed in the converted proposition, which was undistributed in the original one. And by the application of this law it is found that universal negative and particular negative propositions may be converted without any change of quantity or quality, that the universal affirmative can be converted by limiting the quantity of the predicate, and that the particular negative may be simply converted after changing its quality, that is, changing it into a particular affirmative by transferring the sign of negation from the copula to the predicate.

Now, if we examine predications as they are naturally expressed, there does not seem to be any objection to the order of the term being changed provided there is a sufficient reason for the change. If we say “whales are included in the class mammals,” we mean the same as “the class mammals includes whales.” If we say “thunder succeeds lightning,” we are understood no better than if we say “lightning precedes thunder.” The predication “gold

is heavier than silver," expresses the same relations as "silver is lighter than gold." The sentence "John strikes the table," is, as far as thought is concerned, exactly the same as "the table is struck by John." In short, if we express any relation in a predication, the laws of thought and language require nothing more than clearness and accuracy in the expression ; and it is a matter of indifference which term of the relation comes first.

But, if we examine the conversions of *logically formed propositions*, we cannot so easily admit their legitimacy. The proposition "roses are red," becomes, in the hands of logicians, when converted, "some red things are roses." The simple sentence "thunder succeeds lightning" is metamorphosed into "a class of things succeeding lightning is thunder." The monstrous forms of language which require to be introduced for the purpose of converting the majority of logically moulded propositions appear to afford a strong reason for doubting the legitimacy of the process. But, as we have seen, the principal objection does not lie against transposing the terms of a predication, but rather against the changes to which naturally expressed predications must be subjected, in order to bring them into the so-called logical form.

Having examined the principal features of the scholastic doctrine of the proposition, we may sum up our results. Propositions concerned about classification, are wrongly taken to be the type of all propositions ; and all other kinds of propositions are forced into the form naturally assumed by them. The terms of the logical proposition do not, in the majority of cases, correspond with the objects whose relation is predicated in thought. The copula is incapable of expressing the most of relations, and consequently the words expressive of relations are usually relegated to the predicate, this being inconsistent with the facts of thought. The laws of distribution, founded upon facts of classification, are applied where there is no reference to classification, and where they are consequently inapplicable. And



finally the simple process of changing the order of the terms of a relation, when applied to the terms of a proposition forced into the logical form, produces results quite opposed to the facts of thought and the forms of language.

In the preceding exposition and criticism, we have taken our stand upon the position that the psychologist and the logician ought to occupy themselves with the analysis and study of *thought* rather than of *expression*. The scholastic logicians concerned themselves too much with words, mere words; hence the word quibbling, the logomachies of mediæval times. We have inherited their logical system and still teach it in our colleges; and a useless system it is, interesting chiefly as a specimen of the ingenuity of men, who had nothing better to do than to invent puzzles. We hope that the time may soon come when a logic will be generally taught which will attempt to be a real and accurate analysis of thought worthy of the study of men, who wish to understand the working of their own minds in its higher operations, and who desire a method by which their practical researches after truth may be systematically guided.

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## NOTE H.

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### IMPLIED PREDICATIONS.

There is such a connection and complication between truths that, generally speaking, when we know and express one truth there are many other truths implicitly known and ready to be expressed. In the predications which we make regarding the objects of our knowledge we give prominence to some particular feature which it suits our purpose to express, but there may be many other relations connected with the same objects which we know, which we imply in our predications, but which we do not care to state explicitly. Almost every explicit predication



is connected with other implicit predication; in being distinctly conscious of the former we know the latter also, although they may not be so distinctly before consciousness. The explicit predication stands out clearly from amidst the surrounding implicit ones, but they are in the immediate neighbourhood and simply require the attention to be directed to them in order to make them as distinct as that which we have chosen to express. And it is frequently as important to know what is implied in our predication as to have a clear apprehension of what we distinctly state.

A few illustrations will bring the subject more clearly before us.

When we make the general predication.—All men are mortal, we have in our mind the class of men as a whole wherever they are to be found, and we predicate regarding them that they are, without exception, liable to death. But in the very act of making this assertion there is involved the knowledge or belief that some particular men will die. In asserting a universal predication we imply its truth with reference to any particular number. The same kind of implication is involved of course in negative predication. The Law of Contradiction is the expression of another fact regarding the relations of predication. An explicit predication not only *implies* other predication, but may also *exclude* other predication. The proposition above referred to excludes the corresponding negative.—All men, or some men, are not mortal. And in the same way the predication of a universal or particular negative excludes the corresponding affirmatives. To know what a particular predication *implies* and what it *excludes* is the most important condition of *consistency* in our knowledge.

An important class of implicit predication is involved in the predication of the internal relations of an object or class of objects and its constituent qualities. Whenever we predicate a quality of any object we thereby implicitly classify that object with others possessing the same quality.

When we say for example that birds are oviparous we do not *say* anything about other oviparous things and we do not even *mean* anything about them, but if we examine the thoughts which cluster about the explicit predication we shall find amongst them that birds may be classified with other oviparous beings, if such exist. Were we to examine all other cases of *internal* predication we should find that each of them implies an *external* predication; whenever we predicate a quality of any object or class of objects we implicitly predicate that that object or class of objects may be included in a larger class all of whose members are marked by the possession of that quality. This implied predication has also its corresponding *excluded* predication. If we can assert that objects, in consequence of possessing a certain quality, may be classified with all other objects possessing the same quality, we are precluded from making this predication with reference to objects which do not possess the quality. And, generally speaking, where two predications are inconsistent with one another, if the one is either explicitly stated or implied the other is thereby excluded.

For the sake of illustration we offer the following examples of explicit, implied, and excluded predications: —

EXPLICIT <i>Predication.</i>	IMPLIED <i>Predications.</i>	EXCLUDED <i>Predications.</i>
All fishes oxidize their blood from water.	Some fishes, or these fishes, oxidize &c. Fishes belong to the class of animals oxidizing &c.	No fishes oxidize &c. Animals which do not oxidize &c. are fishes.
All planets move in elliptic orbits.	Any particular planet moves in an elliptic orbit.	All or some planets move in an orbit not elliptic.
	The class of bodies moving in elliptic orbits comprehends planets.	Bodies moving in a parabolic or other non-elliptic orbit are planets.
Whales belong to the class <i>mammals</i> .	Some mammals are whales. Some of the qualities possessed by all mammals are possessed by whales.	No mammals are whales. Mammals possess no qualities in common with whales.
Alfred Tennyson is a poet.	Alfred Tennyson possesses the genius and other qualities which constitute a poet.	Alfred Tennyson is wanting in poetical genius.

EXPLICIT <i>Predication.</i>	IMPLIED <i>Predications.</i>	EXCLUDED <i>Predications.</i>
The angles of a plane triangle are either equal to two right angles or unequal.	If they are equal to two right angles they cannot be unequal, and <i>vice versâ</i> .	They may be both equal and unequal.
John Smith is a drunkard.	John Smith cannot control his appetite for strong drink.	John Smith can choose either to drink or not to drink strong liquor when he pleases.
The line A is double of B.	The line B is half of A.	The lines A and B are equal. The line B is greater than half of A.
The sun illuminates the earth.	The sun is luminous. The sun and earth are so related in space that light from the former can fall upon the latter.	The sun is neither a self-luminous nor a light-reflecting body. The earth is so situated that rays of light from the sun cannot fall upon it.

Having illustrated the relations between explicit and implied and excluded predications we may sum up our results in the following canons :—

1. Whatever relation is predicated of a class of objects may be predicated of any individuals belonging to the class; the denial of this relation with reference to any or all of these individuals is excluded.

2. The predication of an internal relation of any class of objects implies an external relation, viz. that these objects belong to a larger class of things possessing the quality predicated. The denial of this and the assertion that objects not possessing the quality belong to the class are excluded.

3. The predication that an individual belongs to a class implies the possession of the qualities constituting the class. The contrary is excluded.

4. The predication of any external relation between two or more objects implies the existence of all the conditions which renders that relation possible. The denial of these conditions is excluded.

5. Generally, the predication of any relation excludes the predication of all other relations which are inconsistent

with it, and implies the predication of all relations which are its necessary conditions or consequences.

Notwithstanding the fact that these principles regulating the implication and exclusion of predications are clear and certain, there are actually found many inconsistencies and inaccuracies amongst the thoughts of men. Predications are frequently thought to be implied which are not really implied, and thought to be excluded which are not really inconsistent with admitted truth. And it is the great duty of the instructors of mankind to spread abroad accurate and consistent knowledge, that is, knowledge in which established principles and facts are accompanied by everything implied in them and from which all inconsistent opinions are excluded. We may refer, by way of illustration, to some mistakes which are frequently made or have been made in determining the implication or exclusion of predications.

In judging of the national characteristics of foreign peoples, striking features are often erroneously supposed to be universal, and false judgments are consequently pronounced in particular cases. Englishmen are of the opinion that the Germans are a musical people, and it might be supposed that every particular German is a musician either actually or potentially. But such would be doubtless a mistake.

Europeans are of opinion that Bengalis are an untruthful people, and many of them in Bengal act upon the belief that the word of no Bengali is to be trusted. This is unquestionably an error. Bengalis on the other hand are of opinion that Englishmen are harsh and overbearing, and frequently apply this judgment indiscriminately. This is equally erroneous.

Defenders of the Jewish and Christian Scriptures maintain their accuracy and truth, and many of them think that it is implied that every statement must be accepted as literally true, and they will not admit any hostile criticism



which results in disclosing any inaccuracies or inconsistencies. Believing that the Scriptures are true they think that if anything in them is shown to be inaccurate there is nothing worth preserving. They do not see that the presence of most important religious truth in the Scriptures is quite consistent with the presence of many scientific and historical inaccuracies and many inconsistencies amongst details. Consequently when they learn that inaccuracies or inconsistencies have been pointed out they fear that the citadel of their faith has been taken and that they can have no confidence in any religious truth whatever. The same foolish position is frequently assumed by the enemies of Christianity. Some of them appear to think that, if they have shown statements in the Scriptures to be scientifically or historically inaccurate or mutually inconsistent, they have demonstrated the falsity of Christianity, whereas in reality they have not approached the foundations of the Christian faith in their attacks.

Similarly, in former times, it was usual for the followers of rival creeds to attack with virulence subordinate details in the religious systems or Scriptures of their antagonists, thinking that by so doing they were aiding their overthrow. And generally speaking *sectarians* are those who are unable to see that there may be possessed great and important religious truth quite consistently along with many minor points of form or doctrine which they cannot agree with.

In philosophical doctrines there may often be an appearance of inconsistency between two predications when in reality they are quite consistent. For example Mr. J. S. Mill has endeavoured to show that Sir W. Hamilton's Doctrine of the Relativity of Knowledge is inconsistent with his Doctrine of Immediate Perception. In the former doctrine Hamilton maintains that we do not know things-in-themselves; in the latter doctrine, that we have an immediate knowledge of real things. Mr. Mill assumes



that the things spoken of in the former doctrine are the same as the things said to be known in the latter, and upon that assumption rightly concludes that the one statement is inconsistent with the other. Now it appears to us that a careful examination of Hamilton's writings will show that Mr. Mill is incorrect in his criticism, and that Hamilton in the two doctrines is speaking of two quite different things in the Doctrine of the Relativity of Knowledge he teaches that the cause or substratum which underlies the objects of our senses is unknown ; in the Doctrine of Immediate Perception he teaches that the objects of our senses are directly known ; and between these statements there is certainly no inconsistency.

Again, there are many in the world who believe that God's will is sovereign, or that all events in their lives are controlled by Fate ; and frequently they think that this implies that their own efforts in adverse circumstances are unavailing. They cannot reconcile the sovereignty of God with the importance of exercising all their own power and wisdom at all times as if they were sovereigns of their own lives. In consequence of permitting the idea of an over-ruling sovereignty to fill their minds to the exclusion of the idea of their own personal responsibility, when temptation or adverse circumstances come upon them they yield without an effort and prove how helpless and worthless man is if he have not a lively sense of his own dignity and responsibility.

Sophistical reasoners in their attempts to mislead the people usually endeavour to show that opposing statements are quite consistent or that really consistent statements are incongruous. And generally speaking it is of the greatest importance for seekers after truth to watch carefully appearances of consistency and appearances of incongruity ; falsehood frequently comes veiled under the one and truth is frequently concealed by the other. Doctrines apparently conflicting may frequently be comprehended

harmoniously under a higher truth; and doctrines joined together in some human system may be as inconsistent as light and darkness.

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## NOTE I.

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### A PRIORI REGULATIVE PRINCIPLES.

That there are a priori principles which regulate our intellectual activity is admitted by all psychologists. We say *all psychologists*, because even the most extreme advocates of the experiential school must and do admit that the character of our knowledge and our thought depends, at least to some extent, upon the constitution of the nature with which we are born into the world. And in so far as the nature which we inherit from our parents *determines* our experience in so far we are under the government of a priori principles. There are some who hold that our mental experience depends upon the character of the physical organism with which we are born. Even in this case our mental activity is governed by a priori laws. It is maintained also that the physical organism which we inherit is itself the result of the indefinite past experience of our ancestors; but manifestly the past experience of our ancestors at every stage must have been regulated by something a priori, something in the condition of things immediately preceding. So that, even upon this theory, all past experience must have been under the government of a priori principles, and the accumulated results of that experience admittedly involve the a priori principles which govern present experience. Whether therefore the a priori principles which regulate our mental activity are established in connection with our physical organism or our mental nature it must necessarily be admitted that there are such

a priori principles. both in the present condition of human nature, and at every past stage of progress by which human and inferior races have advanced. We shall therefore assume the existence of a priori regulative principles as indisputable, and proceed to discuss the account which Hamilton gives of them.

After dividing necessity or necessary principles into two kinds—Positive and Negative,—and briefly describing the former, Hamilton proceeds to the exposition of the doctrine, peculiar to himself, of Negative necessity. This doctrine he denominates the Law of the Conditioned, which he enunciates in the following terms :—“ All that is conceivable in thought lies between two inconceivable extremes which, as contradictory of each other, cannot both be true, but of which, as mutual contradictories, one must.” The two inconceivable extremes are called respectively the Absolutely Unconditioned or the Absolute, and the Infinitely Unconditioned or the Infinite, and the conceivable middle sphere is called the Conditioned. Thus the Conditioned is the mean between two exclusive extremes neither of which can be conceived as possible, but of which on the principles of Contradiction and Excluded Middle, one must be admitted as necessary. This Law of the Conditioned is illustrated by being applied to Space and Time. Space must be either Absolutely Limited or Infinitely Unlimited; upon the principle of Excluded Middle space can have no intermediate predicate applied to it; but it is impossible for us to think of space as either Absolutely Limited or Infinitely Unlimited, — we can think of Space only as Conditioned or Conditionally Limited. Such is Hamilton’s famous Law of the Conditioned.

Without entering into an exhaustive examination of this Law we offer the following critical remarks :—

1. One of the inconceivable extremes,—the Absolutely Limited—appears to involve contradictory elements. That which is limited cannot be absolute in any sense of that

term. The idea of limitation necessarily implies two things—something which is limited and something which limits—and these two things are mutually relative. The ideas of the Absolute and the Limited are mutually inconsistent. On the other hand the ideas of the Infinite and the Unlimited are not inconsistent, and there is no difficulty in conceiving the Infinite except that which arises from the weakness of the human mind. Again, when we apply this Law to space, for example, the two extremes do not present the same difficulty. Absolute space, that is space absolutely limited is inconceivable, *not from the weakness of our minds but because the attributing of a limit to space is inconsistent with our idea of what space is.* Infinite space is inconceivable *from the weakness of our minds.* Thus we see that the two apparently contradictory extremes do not arise naturally in our thoughts; they have an appearance of being manufactured for the purpose of satisfying the requirements of the Law, and one of them is inconceivable because it is so constructed by its author as to be inconceivable.

2. What is the meaning of saying that “all that is conceivable lies between two inconceivable extremes?” According to the conditions of the case *there is no middle sphere* between the two contradictory extremes; all that is between them is excluded by the well-known Law of Excluded Middle; how then can thought be concerned about that which, by one of the necessary Laws of Thought, cannot be thought about? Thus the Law of the Conditioned appears to be inconsistent with the Law of Excluded Middle; both of them are Laws governing our thoughts; and that which is made the sole object of our thought by the former is absolutely excluded by the latter.

3. The object which Hamilton had in view in instituting this Law—the limitation of thought to its proper sphere—may be equally well accomplished by an appeal to the universally recognised conditions of thought. All



human thought is concerned about *phenomena* under the relations of Difference, Resemblance, Simultaneity and Succession and is governed by the great Laws of Identity, Contradiction, and Excluded Middle; or if thought endeavours to reach beyond phenomena, the non-phenomenal objects must be draped in phenomenal clothing. These restrictions imposed upon thought, if observed, are quite sufficient to keep us from the transcendental metaphysics against which Hamilton directed his Law of the Condition.

THE END.

















